



OFFICE,

COLONIAL BUILDINGS—44A CANNON STREET, LONDON, E.C.

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The Sale of Food and Drugs Bill has passed the second reading in the House of Lords, and is now undergoing their lordships' manipulation in committee. The Earl of Morley, in a short speech on the second reading, threatened another tilt against that formidable word "knowingly," and Lord Redesdale thinks that articles which profess themselves to be "mixed," in accordance with clause 7, ought to state what they are mixed with and the percentage of the ingredients. We may here state that on bringing up the report in the Commons, Mr. Slater-Booth had added the following words to clause 9 (respecting the appointment of analysts): "Provided that no person shall hereafter be appointed an analyst for any place under this section who shall be engaged directly or indirectly in any trade or business connected with the sale of food or drugs in such place."

We recently reported a case of death occurring from an explosion in Ireland, the immediate cause being that sulphuret of antimony had been used instead of black oxide of manganese. The Irish Apothecaries' Company, whose servant made the error, have agreed to pay 1,500*l.* compensation to the widow of the deceased.

A Pharmacy Bill for Ireland has been introduced by Sir Michael Hicks-Beach, the Chief Secretary. It proposes to form a Pharmaceutical Society by nominating certain persons who shall constitute the first council. An examination is to be instituted for the title of "Pharmaceutical Chemist," including the Latin and English languages, arithmetic, botany, materia medica, pharmaceutical and general chemistry, practical pharmacy, and the British Pharmacopoeia. The fees for this examination are to be equal, or as nearly as may be, to those charged by the Pharmaceutical Society of Great Britain. Provision is made in the bill for reciprocity between the British and Irish societies; that is, members of one body, on presenting their credentials and paying the necessary fees to the other society, are to be at liberty to share the rights and privileges of that society.

The President and Vice-President of the Pharmaceutical Council, with several London members of the council, and accompanied by the solicitor (Mr. Flux), had an interview with Sir M. Hicks-Beach respecting this bill on the 27th ult., and endeavoured to convince him of the injustice of giving away to a society of the character of which no one could know anything a title which they, the British society, had created and made valuable. It was also pointed out to the Chief Secretary that by this bill the Irish society, if in want of money, might flood Great Britain with "pharmaceutical chemists" of an inferior

stamp, a course which the British society would be powerless to prevent. The deputation urged the union of the pharmacy of Great Britain and Ireland by the extension of the British society's operations to that land, and Mr. Flux handed to Sir M. Hicks-Beach a bill he had drafted embodying such a proposal. The Chief Secretary intimated that the independent society principle was fixed and irrevocable. In order to preserve the rights of the British society he suggested the establishment of an *ad eundem* examination, but further than this he could not be induced to go.

Another deputation saw Sir M. Hicks-Beach after the council meeting, and informed him of the decisions there arrived at. With regard to his suggestion of an *ad eundem* examination, they presented a reply in writing to the effect that an established society ought not to be called upon to promise such an arrangement to a society not yet in existence. If such terms were ultimately arrived at it should be by the mutual respect of the parties concerned. The Chief Secretary was, however, firmer than ever, and expressed his intention to carry the bill in its integrity, with some modification which should prevent an Irish "pharmaceutical chemist" from claiming any share in the British society's possessions.

At the first meeting of the new council, Mr. Hills was re-elected president, Mr. Bottle vice-president, and Mr. Williams treasurer. For the office of vice-president the election fell first on Mr. Savage, but that gentleman declining to serve, Mr. Bottle was re-elected. The Irish Pharmacy Bill occupied the chief share of attention.

Mr. Schacht, Mr. Sandford and Mr. Frazer thought that the deputation which had waited on the Chief Secretary for Ireland had carried their opposition too far. If the Irish pharmacists so much preferred an independent society, why should we endeavour to force our society on them. There was nothing for us to gain by so doing, and it would certainly cost a good deal. Instead of opposing the bill *in toto*, it was therefore argued by Messrs. Schacht and Sandford that it would be better to merely use their influence to prevent an unfair advantage being taken of the reciprocity clauses. On dividing, however, the three gentlemen named alone voted against the action of the deputation, and afterwards a petition in opposition to the bill was adopted and signed officially, those three gentlemen still opposing. Allusion was made to Sir John Astley's Drugging of Animals Bill. The solicitor thought the bill too absurd to have any chance of passing, but Mr. Baynes thought it would not do to rely too much on the bill being overthrown on account of its absurdity. It was resolved to oppose it. Mr. Frazer brought forward a series of resolutions founded on the views of the Glasgow memorialists. He did not himself support them all, but he strongly advocated that candidates for examination who should fail on certain points should be credited with those subjects in which they might have passed. He urged this on account of the present scarcity of assistants and apprentices. The resolutions also advocated the selection of Scotch examiners from a wider area, and the occasional holding of examinations in Glasgow as well as in Edinburgh. Mr. Williams seconded the proposal *pro forma*, in order to admit of a discussion. Mr. Cracekell, in opposing the resolutions, asked what would be thought of a man who should pass two subjects on one occasion, another two three months later, and so on till he had got through the series. The examinations, he said, were a single whole, and were only divided into separate subjects for the convenience of the examiners. Several other gentlemen spoke in opposition to the Glasgow views, and Mr. Frazer replied to the criticisms. On putting the resolutions to the vote they were supported by himself alone.

Sir John Astley has introduced his Drugging of Animals Bill, which, if passed, would considerably affect druggists in England only. It would demand the registration of every sale of the mineral acids and of sulphates of iron, copper, and zinc, as well as of many of those substances now in Part 2 of the Poisons Act.

The Society of Public Analysts, at a general meeting on June 2, "feeling the deep obligations they owed to the Right Hon. Dr. Lyon Playfair, M.P., and Dr. Chas. Cameron, M.P., for the strenuous and successful (!) exertions which they had made in the House of Commons for the improvement of the Sale of Food and Drugs Bill," unanimously elected those gentlemen honorary members of the society. We think the doctors have abundantly earned the applause of that professedly one-sided and obviously interested club of analysts; and we could hardly pay a worse compliment to their character as statesmen.

A meeting of the Executive Committee of the British Pharmaceutical Conference was held on May 19, Professor Bentley, vice-president, in the chair. Professor Attfield announced that since the annual meeting about 400 new names had been received, some from Australia. Mr. Siebold had quite recovered from the illness which had caused delay in the publication of last year's "Year-Book," and he assured the committee that the whole of the manuscript of the next volume would be laid on the table at the next annual meeting. The salary of the assistant secretary, Mr. R. H. Davies, was advanced from 25*l.* to 40*l.* The date of the approaching Bristol meeting was announced as Tuesday, August 24, and Wednesday, August 25. The meeting for 1876, it was stated, would probably be held at Glasgow, as the British Association was to assemble there, and an invitation from the Glasgow Chemists' and Druggists' Association had already been received.

Among the deaths we have this month to record is that of Mr. Frederic Curtis, of Baker Street, one of the best known of London chemists.

In the House of Commons, on May 27, Sir T. Chambers asked the Chancellor of the Exchequer whether he had come to any determination as to the course which ought to be pursued with reference to the administration of the Civil Service, as it was affected by Civil Service trading. The Chancellor of the Exchequer replied that nothing in connection with this matter had been brought to the notice of the Government since the discussion last year on the motion by the hon. gentleman. He was not aware that there was anything which called for interference on the part of the Government.

There is scarcely any news to report in connection with the annual meeting of the Pharmaceutical Society last month. No discussion occurred, and the whole of the business was completed within an hour.

Mr. Bottle gained the highest place on the pharmaceutical poll, and Mr. Mackay was two votes behind him. Messrs. Radley and Stoddart having retired, their places are filled by Messrs. Cornelius Hanbury and Chas. Cracknell. This alteration leaves the provinces with 11 representatives to 10 for London.

Mr. Salt has announced his intention of opposing the Irish Pharmacy Bill, and Sir William Harcourt the Drugging of Animals Bill, on second reading.

Firms desirous of advertising to ten thousand chemists and druggists—all distinct establishments—should avail themselves

of our next issue. We can undertake to distribute that number of circulars in our next issue for any house at a cost not equalling the expense of postage alone. This is a perfectly *bonâ fide* circulation, although, according to an advertisement in a contemporary, it would appear that only one journal can give a *bonâ fide* circulation, that particularly *bonâ fide* issue being made up, as is well understood, by sending frequently duplicate, and sometimes three, four, six, or even more copies to one establishment.

EAU DE COLOGNE.

IN our search for heroes we venture this month to take our courteous readers back the best part of a couple of centuries, and away over Europe till, like the valiant Ritter Hugo, we "coom to der banks of der Rhein." There, in the ancient city of Cologne, at the beginning of last century, dwelt the reverend-looking gentleman whose portrait decorates the opposite page. His name was Giovanni Maria Farina, and he kept a shop in that fine old city, where he sold jewellery, trinkets, and perfumery. We can scarcely bring ourselves to believe that such a majestic-looking countenance ever beamed behind a counter, but history is inexorable on the point. Our likeness has been copied expressly for us from a handsome oil painting which was itself taken from life, and which, with portraits of his successors and descendants, now hangs in the chief room of the large and handsome building that has been erected on the very spot where the first Mr. Farina's shop stood, and which now monopolises all that part of Cologne which can with any approach to accuracy be designated "gegenüber dem Jülich's Platz."

It is almost superfluous to add that Mr. Farina's title to glory lies in the fact that he was the veritable inventor of what he called Kölnisches Wasser, or, as it is much more elegantly designated in its French synonym, Eau de Cologne.

He was an Italian by birth, born at Santa Maria Maggiore, in the valley of Vigenza, district Domo d'Ossola, in the year 1685. He had emigrated to Cologne, however, and became a naturalised German, changing his first name to Johann at a somewhat early period. Certainly he was in business "opposite the Jülich's Place" in the year 1709, for his commercial books back to that date are still in the possession of the firm. Kölnisches Wasser is among the entries at that period, so that the perfume has been in existence certainly since that date. In 1726 the trade was flourishing, for in that year he sent for his brother John Baptist from Italy, who became his partner. The latter died in 1732, and John Maria, who was unmarried, found himself again alone. Then he sent for the son of John Baptist—who was also his own godson, and was luckily named John Maria—from Italy, and gave him a partnership. In 1766 the original old gentleman died, and left the concern exclusively to this John Maria the second. This one lived till 1792, after which his three sons—John Baptist, John Maria, and Charles Antony Hieronymus—reigned in his stead. The middle one of these, who was obviously intended to be the survivor of them all, perversely died first, and so for a moment the famous name was lost to the firm. But the other brothers both named their eldest sons John Maria, and these ultimately succeeded to the proprietorship of the business. The son of John Baptist died in 1833, but the other John Maria is still the head of the house. His son, who is also named John Maria, is actively associated with the senior Mr. Farina in the conduct of the business.

So much for the genealogy of the concern. We may now return to the article itself.

THE CHEMIST AND DRUGGIST PORTRAIT GALLERY.

XVII.

*advs. C. D. M.**Gio Maria Farina*

JOHANN MARIA FARINA. (1685-1766).

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Very much to our disappointment we have not been able to discover any poetic legend in connection with its discovery. The receipt for the famous Hungary Water, which dates back to the fourteenth century, was communicated to the Queen of that land by an angel, and its use made her so beautiful that when the King of Poland saw her he promptly fell in love with her and offered marriage. But angels seem to have lost all interest in human affairs since the Reformation, and, as far as we can trace, Mr. Farina had nothing except his own good taste to aid him in the concoction of the perfume which has since become so world-famous. How it was first advertised, and what the swells of Cologne thought of it when it was introduced, we know not; but anyway it is certain that imitators sprang up even during the lifetime of the first Mr. Farina. And here comes a point which is worthy of a little investigation. These earliest imitators professed to have obtained their recipe from a certain Paul Fémis, of Cologne. A year or two ago Dr. Chadwick, of Boston (U.S.), while looking through the medical pamphlets preserved in the library of that city, came across an advertising circular, entitled "Virtus et Effets de l'excellente Eau admirable, ou Eau de Cologne, approuvée par la Faculté de Médecine le 13 Janvier 1727." This circular described the preparation as having been invented by an Italian, Signor Paul Fémis, of Cologne, and as possessing the power of restoring the parts of the body attacked by any disease, or predisposition to the same, and recommended it in cases of apoplexy, paralysis, palpitation, obstructions of the liver, spleen, and kidneys, migraine, sore eyes, ringing in the ears, toothache, gout, burns, bruises, &c. Nothing is said to commend it as a perfume, and instead of supposing, as Dr. Chadwick seems to have done, that Fémis and not Farina was the original inventor of what we now know as Eau de Cologne, we see no other conclusion to draw from this circular than that there were in existence at that period two Eaux de Cologne, the one a quack medicine manufactured by Fémis, the other a perfume prepared by Farina. What is certain is that nearly all the competitors who afterwards arose, sought eagerly for some means of lawfully using the name of Farina, thus indicating, at all events, that the preparation of Fémis never managed to attain to anything like permanent fame.

Other Italian families of the name of Farina had also settled in several towns of Germany, chiefly in Düsseldorf, and from thence about the year 1750 several new firms arrived in Cologne, all devoting themselves to the fabrication of the popular Wasser. But the high tide of prosperity occurred about 1760, during the seven years' war, when the French army occupied the Rhenish provinces and possessed themselves of Cologne. They brought away with them samples of the perfume, and thus spread its popularity throughout their own land. Meanwhile one of the Düsseldorf Farinas, himself owning the fortunate prefixes of John and Maria, had established himself in Paris; and it happened that when the firm whose fortunes we are now tracing endeavoured to place a branch house in the French metropolis they were met by the successors of this Paris house with a lawsuit, which, however, resulted favourably for the Cologne firm.

The trade continued to grow, and Farinas came from all parts to settle in Cologne in the hope of securing a share of the profits. Others who saw how much depended on the name, but who held it not themselves, went to Italy, where Farinas were not uncommon, and for a small sum bought the partnership of some peasant, valuing the purchase so much the more if the correct Christian names were also attached. One of the agreements thus made contains such clauses as the following:—"The name of the business to be established will be 'Jean Maria Farina' . . . Mr. Farina will not be allowed in any case whatever to avail himself of the privilege of signing as

partner. . . . All insight of the books, correspondence, papers belonging to the partnership, shall only be allowed to him (a labourer from Lombardy who could not read, nor write his name) in person, and not at all to his attorney, agent, or assignee, &c., &c." It has occurred that such agreements have been declared null and void by the judicial courts of Germany; but most of these contracts have been dissolved shortly after their conclusion, and in the agreement for the dissolution it has been stipulated that the Cologne partner should retain the firm, the Italian one having been indemnified with a small sum of money.

Early in this century there were in Cologne no less than sixty manufactories of Eau de Cologne, the great majority carrying on business under the title of Farina. A French poet, Le Maout, wrote:—

Et chaque jour le Rhin vers Cologne charrie
De nombreux Farinas, tous "seuls," tous "Jean Marie."

But those who could not use the coveted Christian names could at least adopt the "gegenüber," and, if they could not be opposite the Julich's Place, which is quite a small square on one side of a street, they could at least manage to be opposite something else, and so every "place" and "market" in Cologne, of which there are many, has been turned to account for the sake of using the precious word "gegenüber" on the labels.

To record all the legal contests which have occurred in the history of this trade would be a heavy and perhaps a somewhat monotonous task. In Mr. Farina's house there is a room which is called the Cabinet of Archives, in which all the papers connected with the various lawsuits in Germany, England, France, and elsewhere are carefully preserved and arranged. A few weeks ago, when the present writer was shown into that room, there were 21 cases on hand, and 392 settled.

Coleridge seems to have been upset in some way during his stay in Cologne about 1829, for on leaving he wrote two particularly spiteful verses against the city, which have hung to it ever since. In one he tells us that

Master Mum's Rudestheimer
And the Church of St. Geyron
Are the two things alone
That deserve to be known
In that body and soul-stinking town of Cologne.

We are disposed to think that an action for libel would lie against the publishers of Mr. Coleridge's poems if brought by the City Council, the Dean and Chapter of the Cathedral, or by Mr. John Maria Farina. The city by no means deserves the reputation for evil odours with which the English poet has distinguished it, and if the Cathedral and Mr. Farina be not its two chief pillars of fame, certainly Coleridge did not succeed in guessing what were.

But these worthy representatives of the Church and the world can well afford to disregard Mr. Coleridge's neglect. No one perfume could pretend for a moment to dispute the sovereignty of popularity with Eau de Cologne. Next to Germany Great Britain is the largest consumer, its use here, according to certain fashionable authorities, not being limited to the toilet; but France is also a most important customer, and we are assured that not even the last war has had any effect in diminishing the demand. And yet Bavarian beer can only be sold in Paris at this time by labelling it Alsatian. America, of course, buys largely, as it does of every luxury. In fact, there is no doubt that not only the original and genuine Mr. Farina is doing exceedingly well, but a good number of his competitors seem to be sharing in the prosperity. None of the establishments in the city compare in point of size or handsomeness to the one "opposite the Julich's Platz," but there are several other manufacturers whose out-turn of Eau de Cologne must be considerable. Casual visitors to

Cologne find dépôts for the sale of the perfume in every street and square; and we doubt very much whether the establishment "opposite the Julich's Platz" gets even its fair share of the patronage of that portion of the public which always likes to get its goods at first hand.

If we could now present the true and original formula for this famous perfume, we should close this article with a good conscience. But that we are compelled to admit is the one point on which our information is incomplete. One detail, on which much depends is, that great care is taken in Farina's works never to use any but the finest French wine spirit. The essential oils used are produced by certain flower farmers in the vicinity of Grasse, who supply Mr. Farina exclusively.

In the manufacture itself there is nothing remarkable to be noted. At stated periods the proprietor retires to a certain strong room, where, in solemn solitude, surrounded by thousands of pounds worth of these precious oils, he combines such of them as are required. This mixture is added to the spirit in great casks, and the perfume is always allowed a few months to mature before bottling. A curiosity which may be mentioned is that when the casks are emptied there is invariably a deposit of a sort of bluish grey mud, the result, we suppose, of some chemical decomposition between the spirit and the essential oils. This mud, in a tolerably thin state, is collected and bottled and given away. The poor people of Cologne have great faith in its virtues as an embrocation in cases of rheumatism.

It is a curious *revanche* of fortune that Cologne should have secured on the one hand a diabolical reputation for "rags and hags and hideous wenches," where the poet says, "I counted two-and-seventy stenchs, all well defined, and several stinks," while at the same time its one perfume should have become a household word in every civilised country of the world, and little short of a necessity in all ranks of fashionable society.

UNPROFITABLE READING.

BY reading is here included and understood whatever enters into the mode of preparation adopted in a course of study.

There are two distinct kinds of intellectual improvement: book-learning, derived from a printed page; and technical knowledge, drawn in part from literary sources, and largely from practical observation. With the first—popularly termed classical education—we have nothing here to do; it is with the union of the practical and the literary with which we are concerned. Both may fail, not so much, nor half as much, from want of application as from unprofitable labour.

The essentials of all successful reading may be briefly stated, as they commend themselves for adoption, and are universally acknowledged. Order is heaven's first law and the student's hope. It implies systematic work, thoughtfulness, and a clear head; it implies, also, continuous, well-regulated exertion; and that it begets a love for work itself is an experience to which there is no exception.

Order is a mental quality—the power of effecting an equal distribution of efforts and ideas; system is the same power applied to mechanical arrangement. The two should be made one, and both may be infinitely strengthened by cultivation. Lastly, there is the old English term, called labour, without which all other virtues, major and minor, are ineffectual. This labour, with its intellectual order and its mechanical system, is weakened by certain well-intentioned practices that have been adopted in good faith, chief of which, as far as my judgment goes, is the time wasted in taking notes. I would venture to appeal against this unwise habit, which is still existent. In the cumbrous old days of scholarship, when years

were spent on Latin verse and protracted processes of learning were accepted as proof of diligence, the learner gazed with pride on his folio manuscript of annotations; but in this age of admirable text-books their use has been superseded.

I regret that during nine long years of classical, not of pharmaceutical study, two hours every day were de-utilised in this unprofitable toil.

A subject fresh to the compiler is not likely to be correctly noted; attention is distracted from the lecturer, whilst in physical and experimental subjects the value of the illustrative demonstration is lost in the vain attempt to catch the *ipissima verba* of a sentence. A single experiment done afterwards by the learner's own hands, or a plant dissected in confirmation of a botanical allusion, is a far more reliable mode of recollection than a page of disjointed and hastily compiled memoranda.

The time that lies at the disposal of most of us is of so limited a nature that it is wisdom to economise it to the utmost. And can the student hope that his best *memoria technica* will beat or equal the instructions of a well-digested manual?

Note-taking, except the merest headings, is to be deplored as representing the maximum of trouble with the minimum of result. But if there be a gain in seizing *currente calamo* a lecturer's expressions, let me strongly urge the use of shorthand, and say from personal knowledge that its difficulties have been enormously overrated. Three months with one hour's daily application will smooth its opening embarrassments; and three months more at the same rate will give facility in practice. Pitman's system is readily acquired, and its characters are not difficult to decipher. I put my six months' photography against nine years irksome note-taking, and I have not the courage to estimate the saving in pure weariness.

But if this dreary custom of taking notes forms the first illustration of unprofitable reading, there is another which appears closely in the track. I feel sure that a student does himself injustice who follows too implicitly one book, because even a many-sided teacher contracts a mannerism both of expression and of thought; because he is strong in some points and weak in others, and because his teaching bears more or less distinctly the traditional impress of his own school. It is, moreover, no imaginary danger that a beginner may attach undue importance to a stereotyped mode of explanation, and may thus unwisely limit the range of his conceptions. He is tempted to believe in no other prophet than the one through whom he first learnt the rudiments of his faith. It is manifestly impossible that one writer should, like a living kaleidoscope, reflect every combination of light and colour. This is an unreasonable expectation, and he who would eschew unprofitable reading must gather his information from varied sources. A Professor, speaking from an academic chair, is compelled in great measure to be the exponent of a certain curriculum. He acts wisely and from necessity, for he is bound, as a public man, to present his young audience with such a classified arrangement of facts and theories as he may deem most instructive.

Nothing more distinguishes our modern period than the simplicity and excellence of these prepared discourses, but obviously each man *does* approach his subject with strong individual leanings, and that is the very secret of his strength. One reasons lucidly about chemical equations; a second explains the theory of the phosphorus acids in an unequalled manner; a third justifies the reputation of Owen's College by the conciseness of his descriptions and the skill by which so many facts are presented in so small a space. Neither one man, still less one book, can wander into these different paths all leading to a common road, but the learner, while exclusively he follows none, will lessen his labour and not increase it by comparing, combining, and collating the separate instructions which men

can give. This, which I have often done for others, I devoutly wish others would accomplish for themselves, a sentiment which leads directly to a theory long and conscientiously entertained. Technical study has three stages of development, the learning or the storage; then the storage classified; and last, the practical application.

To enter with advantage on our own special branch, the student should have done with his preliminary education, and not be hampered with the rules of English composition, his decimal fractions, or the Latin verbs. Then let him learn and store, by lecture courses, by printed books, by laboratory work, by experiment, by field excursions, by conversation, friendship, and sparingly by scientific meetings. Quickly comes the second stage—the time ripe for classification; then, and not before, the mode of learning changes, not the act, and the task before the learner is to investigate his stores. Let him boldly take his accumulated rough or neatly copied memoranda, and consign them to oblivion; and with his better knowledge and acquired experience let him work out his own digest of things worthy of remembrance. Plan there must be, for the mind cannot without superhuman effort recollect a mass of miscellaneous facts; and plan there must be if the third stage, that of practical application, is to be attained.

May we not say with truth that it is on the right use of this second period that the future hangs? May we not say that the more the facts and the greater the storage, the better and more philosophic will be the summary? May we not add that where in youth there has been this storage, and subsequent orderly arrangement, we may predict with confidence a successful present issue, and an awakened pleasure in these pursuits such as is destined to endure.

JOSEPH INCE.

AROMATICS AND CONDIMENTS.

By P. L. SIMMONDS.

IT is only when brought collectively under notice that an idea can be formed of the importance of any group of products we use. Thus the subject of spices or aromatics and condiments would not at first sight be supposed to be as extensive, commercially or financially, as it really is. Let us therefore group them together with a few passing notes by way of descriptive illustration.

There is reason in the moderate use of spices, flavouring essences and condiments with our food, for these render it more palatable and digestible. The great atmospheric purifier, ozone, is generated in large quantities by certain plants and fruits possessing spicy aromatic odours. We pay nearly a million a year for the spices we receive, although all imported are not retained for home consumption. Aromatic spices and condiments are fragrant to the smell or pungent to the palate. In former times all aromatics were designated by the name of "pepper," a favourite imported spice, which was used in many cases for money, the payment of tolls, &c.

Among the various spices, condiments, and flavouring substances used we have:—Barks, such as cinnamon and cassia. Flowers and flower buds—saffron, cloves, and cassia buds.

Seeds, berries, and fruits—pimento, black pepper, long pepper, nutmegs and mace, chillies and capsicums, mustard, cumin, coriander, anise, fenugreek, cardamoms, grains of paradise, star anise, vanilla, besides various manufactured artificial flavouring essences.

Among roots, bulbs, rhizomes, &c., we may class ginger, turmeric, garlic, shallots and onions, truffles and dried mushrooms. There are also different essential oils obtained by distillation from leaves or seeds.

The fruits of the following plants, which are commonly termed seeds, are much used; some are employed as condiments, some for flavouring liquors, and some for obtaining essential oil:—Allspice, cloves, caraway, dill, coriander, cumin, sweet fennel, anise, lovage, mustard. Their aromatic, carminative and more or less stimulant properties are due to the presence of volatile oils contained chiefly in the vittae or pericarp.

The cassia buds of commerce are the immature flowers (perianth and ovary), or the fleshy hexangular receptacles of the seed of *Cinnamomum Cassia*. When gathered young the receptacles completely envelop the embryo seed, which progressively protrudes, but continues firmly embraced by the receptacle. The buds are of various sizes, having the appearance of nails with roundish heads. If carefully dried the receptacle is nearly black. These buds are imported from the Eastern Archipelago, and are much used in confectionery, having the flavour and pungency of cassia. In some years we get very few, as in 1867, when the imports were but 7,355 lbs.; whilst in 1868 we received 60,676 lbs., valued at 3,565*l*. In the last few years the imports have declined to about 30,000 lbs.

There is not an extensive demand in this country for Cardamoms, although there has been an increase in the imports, which now reach 80,000 lbs., or nearly double what they were a few years ago. The acrid, pungent seeds are used in medicine as aromatic tonics and carminatives, and to give an artificial strength to spirits, wine and beer. In the East they form a universal ingredient in soups, curries, pillaus, ketchups, and sauces, &c. Some extra demand must have sprung up for them on the Continent, for the imports into France in 1870 from Cochinchina were valued at 200,000*l*, or nearly four times the quantity we received.

The seeds of the true cardamom are gratefully aromatic and pungent, with a flavour of camphor, and are esteemed more agreeable and useful in food and medicine than any others of this natural order. They are reckoned carminative and stomachic, and are employed very generally to give warmth to other medicines. According to Mr. White, quoted by Lindley, they are "one of the most valuable articles of modern luxury, regarded as a necessary of life by most of the inhabitants of Asia, a grateful and salubrious accessory of diet, &c."

The seeds of *Annonum Cardamomum*, which are agreeably aromatic, are used by the Malays as a substitute for the true small Malabar cardamoms, *Elettaria Cardamomum*. The seeds of *Annonum aromaticum* are similar in their shape and spicy flavour to cardamoms, and are sold to the druggists of India.

In the East several other species of *Annonum* are employed, as *A. amarum*, which comes from Cochinchina and Quan-lun-hoo. The seeds have a bitter aromatic odour resembling myrrh, and the capsules have even an aromatic and agreeable flavour, due to an essential oil which penetrates them. Cardamom seeds are mentioned by Theophrastus and by Pliny. This spice at the present day is very generally used in the Arab countries.

Both the true and bastard cardamoms are largely exported from Siam, principally to China, and are also used locally for culinary purposes and as a stomachic: an infusion of the seeds is used in headache. The seeds of the bastard kind (*Luk Rheu*), brought from the country of the Laos, are of less strength and value than the true cardamoms (*Krawan*).

The dried fruit of *Uvaria aromatica* are brought down the Nile from the interior of Africa, and are much used as a spice.

The best Cinnamon comes from Ceylon, and is the interior bark of the *Cinnamomum verum*; the cassia bark from China is the inner bark of the *Cinnamomum Cassia*, while that from Java is the *Cassia lignea*. The imports of cinnamon in 1871 amounted to 1,684,635 lbs., and in 1873 to 1,078,753 lbs. In some years as much as 2,000,000 lbs. have been shipped from Ceylon. Of the two kinds of cassia bark, about 1,000,000 lbs. are received. Whilst cinnamon is worth 2*s*. to 4*s*. per lb., cassia vera fetches only 24*s*. to 50*s*. per cwt., and cassia lignea, 56*s*. to 75*s*.

Cinnamon is much used in cooking by chocolate makers and liqueur manufacturers. The shoots which are cut for peeling are usually from half to three-quarters of an inch in diameter, and from three to five feet long. The epidermis is carefully scraped off, an operation requiring some nicety, for if any of the outer bark be allowed to remain it gives an unpleasant bitterness to the cinnamon. In a few hours after the removal of the cuticle, the pieces are put one into the other, the bark dries, contracts, and gradually acquires the appearance of a quill or pipe, the whole forming a congeries of quills more than a foot in length. The best Ceylon cinnamon is thin, smooth, and shining, and of a bright yellow colour: it admits of a considerable degree of pressure, and bends before it breaks; the fracture is thin and splintery. It has an agreeable, warm, aromatic flavour, with a slight degree of sweetness. When masticated the pieces become soft, and seem to melt in the mouth. Cassia bark is easily distinguished from cinnamon by its very mucilaginous character when chewed.

The bark of *Cinnamomum Sintok* (Bl.) is used as a spice, but is not very aromatic, and has a strong odour of camphor.

Cloves, the undeveloped dried flower buds of *Caryophyllus aromaticus*, are much employed in perfumery, pharmacy, distilling, and a number of domestic uses. We import on the average of years about one million pounds, principally from Zanzibar, the Straits Settlements, and the Moluccas, but in 1869 as much as 4,808,037 lbs. valued at 72,649l., was received. The leaves of the *Borera Koenigii* are mixed by the natives of India in their curries, to which they impart an agreeable flavour. When rubbed together they emit a pleasant aromatic smell. They retain this flavour when dried, and are sold in that state in the bazars.

In Bengal a pod of raw tamarind fruit is frequently used to season their food, with pleasant acidity, and lemon is also cut into slices with the rind on, as we use it here to flavour whitebait, veal, &c. In some of their rich dishes they use saffron, white pepper, and cloves; in others, turmeric, capsicum, black pepper, coriander, cummin, and cardamom seeds, cubbs, and cinnamon.

In Brazil the red seeds of the arnatto (*Bixa orellana*) are used in cooking as a condiment and substitute for tomato paste. The Chinese sometimes use the Badian or star anise (*Illicium anisatum*) to give their tea an aromatic taste.

Nutmegs are a favourite spice, of which we import 500,000 to 700,000 pounds annually, chiefly from the Straits Settlements and Eastern Archipelago. The number obtained from a full-grown tree would be probably 2,000 for seven years, but 9,000 or 10,000 are sometimes obtained—800 nutmegs from a tree is, however, a fair general average. Nutmegs are valuable according to size, ranging from 75 to 65 to the pound, 88 to 76, 110 to 90, and the smallest, 140 to 115. From 12,000 to 13,000 nutmegs will weigh 1½ cwt. Mace, the dried arillus of the fruit, is also esteemed as a spice.

The fruit of *Pimpinella Anisum* is very generally used as a condiment in the East and in Europe for essential oil, for flavouring in medicine, &c. The imports in 1870 were 1,683 cwt., valued at 6,858l. Aniseed is principally received from Alicante and Germany (the first is preferred), but some is also brought from the East Indies. It is largely cultivated in Spain, Malta, and various parts of the Zollverein, and also in the island of Socio, Egypt, and parts of Asia. 822 quarters, valued at 3,760l., were shipped from the port of Gallipoli in 1871. It is also used to flavour liquors, sweetmeats, and confectionery. Oil of aniseed is obtained by distillation from the fruit; about 2 lbs. of oil being obtained from one hundredweight. Aniseed was mentioned by Pliny as existing in Egypt. It is an excellent stomachic for delicate women and young children. The Romans chewed it to sweeten the breath, and some Oriental nations still do the same, using also coriander seed.

The seeds of *Anethum sowa* are to be met with in every Indian bazaar, and form one of the chief ingredients in curry powder. They yield a valuable oil, prepared by distillation, and used medicinally.

Caraway seed (*Carum Carvi*) comes chiefly from Holland and Turkey. We import about 16,000 to 20,000 cwt. The aromatic seeds are used by confectioners, in pharmacy as a carminative, and for making an essential oil.

The coriander plant (*Coriandrum sativum*, Linn.) is a native of the south of Europe, Greece, and the Levant. It is abundantly cultivated in Egypt, and a quantity is imported from the Mediterranean. It thrives so well, however, with us as to have become almost wild, and a good deal is cultivated in Suffolk, Essex, and Kent. The produce is from 10 to 14 cwt. the acre. The official part is improperly termed the seed, being in reality the fruit. It is extensively cultivated in India, and the fruit has been from most ancient times, and still continues to be, a favourite condiment in the East. It is an essential ingredient in the curry stuff which flavours the rice of the poor pariah, as well as in the dishes of his Mussulman lord and his European master. All alike chew it or hold it in the mouth for the sake of its pleasant flavour, and the confectioners of Europe, by encrusting it with sugar, form it into a delicious confit.

The fruit, which is carminative and aromatic, is used in liquors, sweetmeats, and cooking. Cullen considered it a better corrective of the taste and smell of senna than any other aromatic. Ginger is, however, now substituted for it. It is used by distillers for flavouring spirits, as well as by the druggists for various purposes.

The exports are large from Madras and other Indian ports. Our imports into this country are seldom more than 40 or 50 tons annually. Although the plant when fresh has a disagree-

able smell, this disappears when dried, and the aroma becomes rather pleasant. A volatile aromatic oil of a yellowish colour is procured from the fruit—10 lbs. yielding about 6 drachms of oil: this is also used as a carminative.

Cumin seed (*Cuminum Cyminum*) is mentioned in Isaiah, and by the name still given to the plant in Egypt. The cumin is also noticed by Aristophanes, Hippocrates and other Greek writers. Cumin is one of the four pungent seeds of ancient medicine. It is little used in this country. The Dutch are said to mix it in their cheese, and in the north of Europe it used to be added to bread. Its principal use here is in veterinary medicine. It is chiefly grown in Sicily and Malta.

The black seed or Gitta of the Arabs (*Nigella sativa*) is used as a pepper in Egypt, Persia, and India, as well as in Syria and Palestine, and very powerful as well as healthful qualities are ascribed to it. A pungent seed used by the Afghans under the name of Siah dana, for flavouring curries, is supposed to be this black cumin seed of Scripture. It is common to strew the seed over the floor of the oven before the bread is put in, and to sprinkle it over the loaves, and even to knead it into the dough in the East.

Fenugreek (*Trigonella Foeniculum Græcum*) is a favourite article of diet with the Parsees of India. Poultices of the meal are employed in veterinary practice, and the Arabs use it in fomentations.

There are about a dozen large manufacturers of Mustard in the kingdom, although the professed makers are legion. At one of the late International Exhibitions held in London there was shown in the food collection not only a great variety of British and foreign mustards, but the whole process of preparation could be seen in operation, from the pounding of the seed and the sifting of the meal to the manufacture of the boxes and tins, and the packing and labelling, the whole being dexterously and rapidly performed by labour-saving automatic machinery.

The different Oriental species of *Sinapis*, with their varieties, are difficult to determine with certainty even from specimens of the seeds. Two kinds of seed are used for mustard: the black (*Sinapis nigra*), extensively cultivated in the vicinity of Wisbech, and the larger yellow seed (*Sinapis alba*), principally raised in Essex and Cambridge. They are pounded separately by heavy steam-worked iron pestles, and mixed in due proportions, the flour of the brown seed being far more pungent than that of the white. The pungent volatile oil of the black mustard and the biting acid liquid of the white both result from the action of water on some of the constituents of the seeds.

The foreign mustards are mostly sold diluted with vinegar, but among the foreign kinds of prepared mustard are red mustard, yellow flavoured with Tarragon, mustard flavoured with fine herbs, &c.

In the Roumania provinces a fluid mustard is made by adding must of wine, which gives to this condiment a dark-brown colour, a more fluid consistence, and a sweeter taste than that of French or English mustard. This softening is not, however, sufficiently great to remove the pungency; in fact the wine rather attenuates the pungency of the mustard, and produces an agreeable effect upon the palate when mixed with the flavour of the meat.

In a commercial sense the word pepper has scarcely any restrictions or limit; nearly every thing hot or pungent comes under the designation. Thus, although botanically we have only one or two species of true pepper (*Piper nigrum*, *Piper tricolorum*, and a few others), there are many which pass under the name, as long pepper (*Chama Roxburghii* and *officinarium*); the African black pepper (*Cubeba Clusii*), which is employed by the negroes of Sierra Leone and the West Coast as a condiment and in medicine; Cayenne pepper, made from the dried and pulverised fruit of several species of capsicum; Guinea grains or Malaguetta pepper; the seeds of *Amomum*, *Malaguetta*; and Ethiopian pepper, the fruit of *Habesbia Ethiopica*.

Black pepper, an article of large consumption as a spice, is the fruit of a climbing plant, the *Piper nigrum*, almost exclusively grown in the Eastern Archipelago. The quantity produced in the Lampong Islands, off the Sumatra shore, is about 16,300 cwt. annually, and this is all shipped to Batavia. An acre of pepper vines will yield about 1,200 lbs. of clean pepper. The consumption of black pepper has very much increased in Europe and America of late years. The imports into the United Kingdom in the last three years have been as follows:—

1872	27,491,968
1873	26,359,781
1874	19,996,843

June 15, 1875.]
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About 15,000,000 lbs. of this is re-shipped to the Continent, &c. The white pepper of commerce is made by removing the pericarp.

The Tascans and people of Syria and Palestine frequently substitute the berries and flower buds of the myrtle for pepper. Sweet bay leaves are occasionally used as a flavouring by cooks, as well as various dried aromatic herbs.

Of *Melaguetta* pepper, Guinea grains, or grains of paradise, we imported in 1870 no less than 2,267 cwt., of the value of 3,220. These aromatic pungent seeds are used in veterinary practice, and in the illegal fortification of malt liquors, &c.

In all tropical countries red peppers or capsicums are largely used. In the West Indies they pass under various names, according to the size and shape of the fruit, as "buckramanni," negro bonnet, bird, and cherry peppers, &c. The species are, *Capsicum annuum*, *frutescens*, *baccatum*, *longum*, and *tetragonum*. The Indians of the Rio Negro, when they have neither fish nor game, boil a quantity of these capsicums, and dip their cassava bread in the fiery soup, enjoying it amazingly. They prefer the small red peppers, which are of excessive pungency. In this country cayenne, the powder prepared from these peppers, is also used as a seasoning. The best is made in Natal and the East and West Indies.

Pimento, sometimes called Jamaica pepper or allspice, the dried unripe fruit of *Eugenia Pimenta*, is almost entirely obtained from Jamaica, where there are nearly 6,000 acres covered with the tree which produces it. The crop varies considerably. In 1867 more than 7½ million pounds were shipped, while in the following year only 4½ million pounds were exported. It has, however, much declined as an article of commerce. Pimento forms an occasional ingredient in curry powders and pungent sauces. The imports into the United Kingdom have been as follow:—

	Quantity	Value
	Cwts.	£
1867	47,179	48,453
1868	16,306	16,342
1869	29,383	31,410
1870	21,282	20,281

An essential oil is extracted from the pimento berry, but it is not generally known that the leaves are equally fragrant with the fruit, and yield on distillation a delicate odoriferous oil, which is often used in Europe for "oil of cloves." A large quantity of leaves are annually wasted while the crop of pimento is being gathered, which might be turned to useful account, as the cinnamon leaves are in Ceylon, for distilling what is called "oil of cloves." There is no finer liquor than that prepared from the pimento berry, and one no way inferior can be obtained from the leaves. For purposes of cookery, branches of dried pimento leaves are found suspended in the kitchens of Jamaica, and they retain their aroma for a long time.

The Vanilla of commerce is one of the most esteemed of all aromatics for its exquisite perfume, and is very expensive, costing five or six guineas the pound. It is the dried, thin, long, pod-like capsule of one or two species of vanilla produced in Mexico, Mauritius, and Bourbon. It is used to flavour chocolate, ices, and confectioneries, and is much used on the Continent as an ingredient in some stimulating and tonic remedies.

Our imports of vanilla vary, 6,000 or 7,000 lbs. being about the average. The United States receive about as much, and the Continent probably more. The value of the vanilla imported into France in 1870 from her colonies was 6,250.

Ginger is an article of large consumption. We receive our supplies from three quarters, Sierra Leone, the East and West Indies. The imports of African ginger in the last five years have been as follow:—

	Quantity	Value
	Cwts.	£
1869	9,566	11,380
1870	6,835	8,999
1871	6,948	8,540
1872	6,167	9,380
1873	7,655	16,383

The ginger plant is extensively cultivated in India from the Himalayas to Cape Comorin, but that of Malabar is consid-

the best. In the mountains it is successfully reared at elevations of 4,000 to 5,000 feet, but requires a moist soil. The leaves and shoots of the broad-leaved ginger, *Zingiber Zrumbit*, are used as greens in Bengal.

The tubers of *Alpinia galanga*, which are faintly aromatic, pungent, and somewhat bitter, are the large galanga of the shops, and are used as a substitute for ginger in parts of India. In Cochin China they are employed when fresh for seasoning fish, as well as for other economical purposes.

Our imports of East India ginger are pretty uniform, as may be seen by the following returns:—

	Quantity	Value
	Cwts.	£
1869	11,835	20,917
1870	15,313	27,647
1871	19,014	28,159
1872	18,310	28,217
1873	14,959	29,830

Nearly as much West India ginger is now received as comes from the East, and it is better prepared. In Jamaica the culture of the plant is largely on the increase: there are between 200 and 300 acres under culture. The shipments of West India ginger to this country have been:—

	Quantity	Value
	Cwts.	£
1869	11,594	25,341
1870	8,262	16,630
1871	8,542	23,547
1872	7,543	22,093
1873	11,214	33,899

There are a few aromatic stimulants and flavouring substances of minor importance which may be incidentally mentioned, such as sassafras nuts, when they can be obtained; dried angelica root, for giving a spurious strength to gin, bitters and other spirits; turmeric, sometimes used as a spice, although the greater part is employed for dyeing; Tonquin beans, for flavouring snuff, &c.

Mushrooms and truffles are extensively employed in cookery for flavouring dishes. Some of the edible fungi, as *Agaricus campestris* and *A. oreades*, the mitre mushroom and the morell (*Morchella esculenta*), are esteemed as delicacies.

Being one of the most wholesome and nutritious of the esculent fungi, and fragrant and stimulating in its properties, the truffle is a common ingredient in sauces and made dishes, especially in France. Those found in England are chiefly *Tuber cibarium* and *T. aestivum*. *Hymenogaster citrinus* is also edible. In France different species are used, among others *T. melanosporum* and *T. magnatum*.

Dried mushrooms are much used in China and Japan, and shipments of them are made from New Zealand to China.

Vinegar is another condiment, the home manufacture of which is between 3,000,000 and 4,000,000 gallons. It is obtained from all saccharine or alcoholic substances, and there are malt, wine, and various other vinegars. Most of the British vinegar is made from malt, wine, or beer, without hops. That sold in the form of pickles, although called malt vinegar, is for the most part wood vinegar or pyroligneous acid. Wine vinegar differs from that made from corn, cider, sugar, &c., on account of the tartar extracted from the grape stones.

Almost every English county has its special sauce with a local reputation, and there are also numerous sauces with foreign names. Thus we have Nottinghamshire, Worcestershire, Yorkshire, Oxfordshire, Woburn, and Brighton sauces, the National sauce, Nabob sauce, Quili sauce, Harvey's, Hardy's, and others.

Besides these numerous sauces made at home, we have been for years importing an annually increasing quantity of unenumerated sauces or condiments, which, in the official trade returns for 1873, are given at 1,247,522 lbs., of the value of 27,492. Under this head Soy is now merged, which used to be entered separately, and amounts to 8,000 or 10,000 gallons, all from China.

Preserved tomatoes and tomato sauce are other culinary flavouring ingredients, which are used even in Australia.

ON POWDERED BLUE MASS.*

By J. F. HANCOCK.

IN some localities the blue pill of the Pharmacopoeia is largely used in form of powder, and its advantages in some cases are obvious. The powder is especially appropriate for administration to children. In the absence of official directions various methods have been devised. The most common practice known to the writer is that of treating the blue pill mass with water until all soluble matter has been removed. That which remains on the filter is dried, and sufficient powder of liquorice root, elm or sugar of milk to make up the original weight. My experience with the above method has not been satisfactory. 1st. Because the trace of oxide which is said to be found may be lost to some extent. 2nd. The process is unnecessarily troublesome and expensive. In the United States Dispensatory, it is stated "that the precise condition of mercury in blue pill is uncertain. A portion is not chemically altered. Some maintain that all the metal is in this state, others contend that a trace of protoxide is formed, and that this is the activity of the pill." The supposed oxide is attributed to the air acting on the surface of the divided metal. If the mercury is not converted into protoxide by trituration, there can be but little doubt that it is oxidised by exposure.

The objections to the processes named induced the writer to devise an improved formula for making pulp, mercury to represent the official pill. The following has been used with entire satisfaction for several years, and the ease with which it may be made, and its economical production, commends it for general adoption:—

PULV. HYDRARGYRI. (Corresponding to <i>pilula hydrargyri</i> , U. S. P.)			
Take of Mercury	354 grains.		
Granulated sugar	sufficient quantity.		
Syrup	"		

Mix the mercury with 200 grains of the sugar, and add sufficient syrup to form a paste with the mercury, and continue the trituration until the globules of mercury have all disappeared. Then place the mortar with the powder in a dry room, and expose to the air with occasional stirring, until the moisture has been dissipated; then add sugar until the powder weighs 1,152 grains. Continue the exposure in dry air, with occasional stirring, for the space of ten days, when the powder is ready for use.

The object of exposure for ten days is to allow the gradual formation of protoxide, upon which its virtues are supposed to depend.

Mr. HANCOCK: The powdered blue pill is largely used, and for several years it has been prescribed by physicians in my vicinity with entire satisfaction, and it is very easily prepared. Many years ago, when Mackenzie was one of the most prominent physicians in Baltimore, he made the powdered mercury and chalk by exposing it for a long time in a room, and there were some physicians in the city who especially recommended this preparation, and said in infantile cases it had a decided effect, far superior to that ordinarily found in the market. I have noticed by this exposure also, that the blue pill mass made in this way gradually darkened, which I attributed to the formation of protoxide of mercury, and I noticed also in comparing this powder with the powder furnished by the manufacturing chemists, where it is made by machinery very rapidly, and quickly bottled, that the shade of colour is decidedly different; it is much darker.

Mr. EBBET: Has Mr. Hancock subjected this powder to a microscopic examination?

Mr. HANCOCK: I have, with 200 diameters, and the globules are not seen, and in this way it is produced at a very trifling expense, while the other is a very expensive and tedious process, and the oxide is wasted to some extent.

Mr. BALLOFF: I have made dry blue mass for many years by mixing one part of quicksilver with two parts of dextrin, which, I think, is preferable to sugar. After spreading it out on glass plates, and letting it dry in a warm room, I never found it turning moist. Made with sugar, it will attract moisture.

Mr. HANCOCK: I use the cane sugar, and with an experience of at least six years, I have never known it to absorb sufficient moisture to be noted.

Mr. MOORE: Mr. Hancock referred to a former preparation of hydrargyrum cum creta, considered by the physicians of Baltimore as superior to anything else. Indeed, they contended that thus made by exposure to the air, it contained no oxide of mercury, and for a long time we were compelled to purchase this. This preparation was exposed sometimes, to my knowledge, for six months, and every boy and customer who went into the store gave it a stir; if this contained no oxide of mercury, how does Mr. Hancock oxidise his in a few days? The physicians contended for that preparation, and it was a long time before we could discontinue its use.

Mr. HANCOCK: Physicians often contend for things that are not exactly as they contend, and I am satisfied that that was the case. In the present instance the colour indicates a change to oxide. Mercury ordinarily is not easily oxidised, and we know it can be taken in enormous doses without producing metallic poisoning. I have noticed in a treatise of the Rev. John Wesley, where he prescribes mercury for the colic, he orders a pound and a half to be taken in two-ounce doses, and if that does not answer, a live puppy was to be put down the patient's belly.

Mr. EBBET: Some three years ago I took the liberty of writing to our colleague, Dr. Squibb, on the subject, asking him to make a powdered blue pill, as the articles we had furnished to us at different times seemed to be very inferior, and the Doctor wrote back one of his characteristic letters, saying he had spent many hundreds of dollars and much time for the purpose of making blue mass and powdered chalk with mercury free from oxide of mercury, but had not so far succeeded, and had made up his mind he never should make another trial. Now, if it is the oxide of mercury that we are after in powdered blue pill, that can be produced very easily. I, not being a physician, do not know really whether blue mass is to contain only metallic mercury finely divided, or oxide of mercury. It is exactly that point I wanted to get at by this query. I always thought that blue mass was simply finely divided metallic mercury, but Mr. Hancock's version of it is that it is oxide of mercury. If we want this, we certainly can easily obtain it without standing it about ten days or six months, as has been suggested. I have made many examinations of powdered blue pill, and found a number of samples where you could distinguish the globules of mercury with a power of about sixteen diameters. I had a sample of powdered blue pill sent me the other day from a colleague in Denver, Colorado, and he informed me, knowing I was interested in this matter, that he had succeeded in making a very nice article of it, and would send me the formula for publication. I placed it under a magnifying power of twenty diameters, and the mercury was there, and when I placed it under sixty I had no difficulty in perceiving it. What I want to come at is, are the virtues of blue pill due to oxide of mercury or to metallic mercury?

Mr. HANCOCK: In reply, I would state I have consulted quite a number of authorities, and almost invariably they have attributed the virtues of blue mass to the trace of oxide to be found in it. Attfield and Bloxam make the statement, and I think it is also in Clark. In the United States Dispensatory the question is left an open one; it is not decided whether it is metallic mercury in fine division, or whether it is the oxide which is formed; but that oxide is formed I have no doubt at all, and by this exposure there is a gradual increase of oxide.

Mr. REMINGTON: In the "Proceedings" of this Association for 1868 will be found a Paper written by me when I was with Dr. Squibb, in Brooklyn, on a kindred preparation—an examination of the mercury and chalk of commerce. Nine samples were examined, one of which, I think, was the Baltimore preparation already alluded to, made by the process which originated with Dr. Mackenzie. I found in it not less than 26 per cent. of the red oxide of mercury, and if such a preparation had been given to an infant in the ordinary dose, poisoning would have resulted in a certain degree; it must be regarded as an injurious preparation when it contains as large an amount of oxide as that. Now, then, it is reasonable to presume that this oxidation was the result of time and exposure, and if it was—I think Professor Procter handed it to me, and it was about ten years old—it is fair to presume in eight years it had contained about 20 per cent.; in six years 15 per cent., and so on all the way down. Now, if the oxidation is what is to be aimed at in the preparation of mercury, it is news to me. I thought that honey was introduced into blue mass and several other mercurial preparations for the purpose of preventing oxidation, and if Dr. Squibb's preparations are of any account, they are all based on

* From the Proceedings of the American Pharmaceutical Association.

that principle. The mercury and chalk is made after dividing the mercury with honey. It is made so that a small amount of honey is retained in the preparation for the purpose of preventing oxidation by holding the globules.

Mr. HANCOCK: I have made the mercury and chalk by the same process, and I have noticed, when it is thoroughly made, it corresponds very well with the preparation furnished by Dr. Scribble, but by long exposure that preparation becomes dark, and not only this, but the mercury and chalk I have been using for the same length of time; but when properly kept, there is surely no danger from the red oxide forming. I have never known any objection made to the preparation I dispense, and I use considerable of both. Experience proves there is nothing deleterious in it.

Mr. RAMSPERGER: This preparation is so uncertain it ought to be abandoned instead of being continued in our Pharmacopoeia. I believe the effect of this preparation depends in a great measure upon the stage of oxidation in which it is, and that metallic mercury in such very small doses has very little effect. When it is given in large doses, it is given for its mechanical action, its specific gravity. This does not hold good in small quantities. I believe the effect depends upon the mercurous or mercuric oxide which it contains.

Mr. MASCH: This is a question that cannot be settled by this Association, or any member of this Association. It properly belongs to the physicians. If they find that finely divided metallic mercury which has not oxidised is what they want, we shall have to find some means to divide mercury and keep it in a metallic state, so it will not oxidise. It strikes me that the effects of this preparation are probably due, as has been stated by several of the gentlemen that spoke before me, to the smaller or larger amount of mercurous or mercuric oxide that has been formed. If that view is correct, we ought to have a preparation that contains a definite amount of the oxide, and abandon the others. The old-fashioned way of making preparations, and increasing their efficiency by exposure without knowing exactly what takes place, I think, ought to be discountenanced as much as possible.

Mr. KEMER: The subject has often presented itself to me, and whenever this preparation has been prescribed by physicians, and I could possibly speak to them, I have always recommended them to use mercury and chalk. I would say, "If you use that, you will get a definite preparation, while if you use powdered blue mass, I cannot guarantee its virtues." I have found a number of physicians from whom I have from time to time received instructions in regard to powdered blue pill, who have dropped it altogether, and have prescribed mercury and chalk, and I must say I have never heard any complaints. I agree with our Secretary, that whenever we find such a preparation where there is such a variable strength and composition so we cannot judge of it, we should at once inform the medical profession, so as to do away with it. The only rational way to insure the progress of medicine is to have definite remedies.

Mr. HANCOCK: I don't like to consume the time of the meeting, but I will make one other observation in this connection. I did experiment with metallic mercury by exposing it in a moist atmosphere. There is a film formed over it which is oxide of mercury. Now, if the oxide of mercury is formed on the surface of metallic mercury in a moist atmosphere, is it not reasonable to suppose that oxide will be formed with evenly divided mercury? I am glad to see the discussion has taken the shape it has. It must be continued as a query, and some definite results be obtained.

Dr. PILE: In the Dispensatory of Wood & Bache, for 1869, is given a formula by Charles Bullock, of Philadelphia, as follows: "Fine-powdered elm bark and mercury, each one pound. Moisten with alcohol and rub together, adding more alcohol as required, until the mercury is completely extinguished, then expose to the air until thoroughly dried, and mix with one pound sugar." It takes so much alcohol, which adds considerably to the cost. If we can get rid of that, the other part is simple, but water alone makes it into a thick cohesive mass, which is difficult to dry, and I suppose the mercury would become oxidised, and the mass sour; so I found the alcohol was far better.

Mr. BALLUFF: This blue mass is one of the old imperfect and indefinite preparations which are hanging along through the English and American Pharmacopoeias. This particular one has long been abolished in the German Pharmacopoeia. I think we shall have to keep it until the next revision of the Pharmacopoeia, but while we are obliged to have it, and have it in a

form to prevent oxidation, I think the powdered blue mass is the more suitable preparation.

Mr. REMINGTON: I would like to state, as a matter of interest, that Mr. Hancock has consented to accept a query on this subject of blue mass, so at the next meeting we may hope to have some methods in which to make a preparation containing the smallest quantity of oxide possible with sugar and mercury, and try it alongside of preparations made containing the mercury in globules.

ESTREMADURA PHOSPHORITE.

DR. NIEDERSTADT, of Hamburg, has furnished us with the following notice of a chemical manure less known in this country, perhaps, than it deserves:—

For the last two or three years (he writes) a mineral substance, containing phosphoric acid, and used as manure, has been imported to our market from Spain. It is found in the province of Estremadura, especially in the neighbourhood of Logroño, and is obtained by mining. It appears in the market in pieces the size of the fist, knotty and hard as stone, of a yellow reddish colour. It is found in considerable quantities, and the facility of importation to Hamburg has rendered it an extensive import article, amounting in the year 1872 to 11,000 kilos., while more than 100 cargoes have already been imported.

This mineral is greatly to be preferred to Lahn phosphorite, which contains 3 to 6 per cent. iron oxide and 1.5 per cent. aluminium oxide, because, in consequence of the trifling quantity of these components contained in the Spanish mineral, it is not exposed to an indissolubility of the phosphoric acid, as is otherwise frequently the case.

The body of phosphoric acid, as shown by various investigations, is considerably reduced by a preponderating quantity of quartz, and scarcely averages 28 per cent.

If compared with the most valuable sorts of guano, such as Baker, Curaçao, and Bolivia—which contain more than 34 per cent. of phosphoric acid—this manure will be found fully 6 per cent. less, and its value must be correspondingly inferior.

The superphosphate obtained from this mineral has a crumbling dry form. The quantity of carbonate of lime varies greatly, sometimes even more than 20 per cent., therefore sometimes a greater quantity of acid is necessary. The results of several analyses are given below:—

Porte Packet.

Phosphate of lime	54.691
" magnesia	7.010
Carbonate of lime	8.065
Sulphate	1.200
Iron oxide	0.621
Aluminium oxide	0.165
Fluoride of calcium	1.520
Manganese	vestige
Silicic acid	0.204
Water	0.250
Total	99.742

The phosphates representing 28.850 phosphoric acid.

Maria Sophia.

Phosphate of lime	62.352
" magnesia	1.905
Carbonate of lime	12.638
Sulphate	2.441
Iron oxide	0.528
Aluminium oxide	0.385
Fluoride of calcium	1.204
Silicic acid	16.412
Water	0.175
Total	99.339

The phosphates representing 39.679 phosphoric acid.

Catharina.

Phosphate of lime	57.369
" magnesia	0.708
Carbonate of lime	7.385
Sulphate	1.599
Iron oxide	1.463
Aluminium oxide	0.405
Fluoride of calcium	1.822
Silicic acid	29.428
Water	0.790
Total	99.959

The phosphates representing 26.668 phosphoric acid.

THE PREPARATION OF VEGETABLE WAX.*

THE production of vegetable wax has always formed one of the principal industries of the province of Kinshiu, and the trees bearing the wax berries (called by the Japanese Haji-mo-ki), grow profusely on the hill slopes and round the edges of most of the cultivated fields (excepting rice ground) of Higo, Hitzen, Sinabara, Chikugo and Chikuzen, whereas in Satzuma they appear to be less prevalent.

The process of producing wax suitable for export to Europe is a tedious one, requiring the outlay of some capital on the part of the manufacturer, who has to keep the berries on hand for at least one year, and, in order to obtain a very superior product, does so frequently for six or seven years from the time of their being picked and sold by the farmers.

The berries ripen in October and November, and are picked by hand. After exposure to the sun in that state for about five days they are packed in common straw bags and stored by the manufacturer in his godown for periods varying from one to seven years. The average value of 10 piculs of the berries in this, their first stage, is 10 yen, the farmer's selling price.

The manufacturer of wax can carry on his business all the year round, being interrupted only by excessive heat or excessive cold. His establishment consists of godowns for storing the berries, a large shed containing the pans for heating, the presses for extracting the liquid wax, and as large a piece of level ground as possible for laying out the wax during its bleaching process. He establishes himself as near as possible to a supply of good clear water.

When sufficiently ripe, the berries are thrashed with bamboo flails, and thus separated from their stalks, and are then crushed. This crushing process, which can readily be done between thumb and finger, discloses a small, hard red kernel, surrounded by an apparently dry husk or fibre. The wax is contained in this fibre, and only to a very small extent in the kernel, but it is not necessary to separate the two. They are then well steamed over an open kettle, the water in which is kept boiling by a wood fire underneath.

From the steaming sieve the mixture is placed "all hot" into the press bags, surrounded by bamboo rings to fit the aperture in the press, and as quickly as possible placed in the press. Wedges are driven home by repeated blows of a mallet, and the liquid runs off into its receptacle at the bottom. Primitive as this style of pressing is, the result has not yet been improved upon by the trial of several hydraulic presses which have at various times been tried by the Japanese for expressing both oil and wax. Their own presses cost little, never get out of order, last long, require nothing but cheap coolie hire, and, in actual percentage of liquid extracted, do very nearly as much work as an expensive "Langue's" hydraulic press, requiring steam or other power to drive pumps which frequently require overhauling and repairing. After being fully pressed, the "cake" or residue of the wax fibre is broken up, again steamed and once more put through the press, thus yielding all its available wax.

Meantime, the liquid quickly solidifies into a large block of a dark green, coarse, and tallowy substance, which is at once boiled down and run off into small earthenware saucers.

The loss in weight of the manufacturer's original purchase of 10 piculs of berries has by this time amounted to 850 piculs. His first quantity was reduced to 880 piculs by the thrashing process, and of the liquid now produced from the press he has only one picul and a half in the form of a block.

In order to purify and bleach the wax for export, it now becomes necessary to re-boil it in its present stage, mixed with water and ashes (either shell or charcoal ashes) and again run it off into large blocks. These blocks are then cut up into thin strips or stored, placed on mats and exposed to the air, during fine clear weather only, for a period of fifteen days, and occasionally sprinkled with water. The material is then again boiled down, mixed with water only this time, and run into large blocks. Once more these blocks are cut up into thin strips and again exposed to the air; this time for a period of about five days.

Again boiled down, with no water, the impurities rise to the surface and are skimmed off, leaving the residue to be run into

saucers, which is the form of vegetable wax known by the European consumer.

In the course of the purifying and bleaching processes the weight of the wax has been further reduced from 1.50 picul to 1.44 picul, and the cost of this production now stands at about the following figures, viz. :—

	Yen
Original cost of 10 piculs berries	10.00
Coolie hire, thrashing and crushing	1.28
Steaming and pressing	1.44
Waste of press bags and bamboo in pressing	0.92
Coolie hire during the bleaching process	1.20
Say	14.24

for the final production of 1.44 picul, being the equivalent of about ten yen per picul for the finished wax, without any allowance for interest on the capital used in the first purchase of the berries or in the plant and property of the manufacturer.

It only remains to be mentioned that the present market value of the finished wax is from 10.50 to 11 yen per picul when packed in boxes ready for export, and even this price, which shows only a loss to the Japanese manufacturer, is higher than the corresponding value of the same article in Europe, so that for the present, at least, this industry is not a profitable one, either to the manufacturer or the shipper. The value of wax, however, varies considerably, and about three years ago it was worth, for the London market, about 20 yen per picul.

Its use appears to be confined to the "facing" of candles and the manufacture of "vestas," and the frequent discoveries of cheaper substitutes for these manufactures materially affect the value of vegetable wax from Japan. For local consumption in the manufacture of Japanese candles there is always a considerable demand for vegetable wax in its unbleached state; but with the prevailing and increasing consumption of kerosene oil even this outlet for the native industry is getting much restricted.

RARE OILS.

THE *Journal of Applied Science* gives a few brief notes on some oils which have been experimented on, or are in partial use. Some of these are of interest.

An oil stated to be extracted from the horse-chestnut is sold as a sedative in gout, here and on the Continent. We were at first doubtful whether this oil were really obtained from the horse chestnut, but the following account of its manufacture appears in a respectable French publication—the *Abeille Médicale*—“In order to extract this oil, the horse-chestnuts are first ground to powder; the latter is then treated with sulphuric ether, which dissolves the oil, resin, and saponine contained in the mass; the oil is then obtained pure by evaporating the ether. Ten kilogrammes of horse chestnuts yield ten grammes of oil. To use it, it must be applied with a fine hair brush on the part affected; if the pain is very intense, the union should be applied circularly, so as to arrive gradually at the centre. When the first application is absorbed, a second one is applied after the lapse of a few minutes, and then a third and fourth if necessary. The oil part is then covered with blotting-paper, cotton, or flannel, and then with oil-skin; the patient must be kept in perfect repose. In some cases the application of oil causes an increase of pain for the first half hour, after which the sedative action commences; but generally the pain gradually disappears without any aggravation.”

In Baden a beetroot oil used to be largely made, but the consumption has diminished on the Continent, for it can no longer compete with petroleum as a burning oil, and there is further a heavy duty levied on its importation into France and Belgium. It is now chiefly used for lubricating wheels and spindles.

The seeds of many cucurbitaceous plants are used for oil-making in different countries; thus, in India, those of the water-melon (*Cucurbita citrullus*), of the cucumber (*Cucumis sativus*), of the melon (*C. Melo*), pumpkin (*Cucurbita Pepo*), and *Cucumis utillissimus*, are pressed for oil; those of the melon, water-melon, pumpkin, and cucumber, yield clear, bland oils, which are suitable for culinary purposes; melon oil, however,

* Paper read before the Asiatic Society of Japan by Henry Gribble, Esq., of Nagasaki.

soon turns rancid. The seeds of the bottle-gourd (*Lagenaria vulgaris*) yield a bland oil, and the seeds of the squash (*Cucurbita maxima*) furnish an oil suitable for food and burning. A medicinal oil is obtained from the seeds of *Luffa acutangula*, which has a medicinal reputation among the native practitioners of India. The seeds of the official colocynth (*Cucumis Colocynthus*) contain rather more than 4 per cent. of a bitter, fixed oil, which has been extracted in India for medicinal purposes. At Unyanyembe and other parts of Africa, where the cucumber grows almost wild, the Arabs derive from its seed an admirable salad oil, which in flavour equals, and perhaps surpasses, the finest produce of the olive.

Egusi oil is obtained from the seed of the wild melon, cultivated extensively in Abbeokuta and other parts of Africa, for home consumption. The value of the oil is about 2s. 8d. per gallon.

Abobora oil of Brazil is also from a *Cucumis*.

From the kernel of the wild mangosteen (*Garcinia Mangostana*) the people on the Malabar coast make a concrete oil, which is said to be used as a cosmetic. The seeds of the jack (*Artocarpus integrifolia*), Durian (*Durio zibethinus*) and other trees would yield oils likewise.

Grape stone oil is used for burning in Italy; it is extracted principally in Modena. In the Levant and parts of Germany, the pips or seeds have long been utilised for this purpose. From 30 lbs. of seeds three quarts of oil may be obtained, or about 18 per cent. The seeds of white grapes are less rich in oil than those of black grapes, and those from old vines yield less oil than the seeds from young vines. Those from Roussillon, Aude, and Hérault vines give 2 per cent. more oil than those from Bordeaux. The oil is of a golden yellow, and loses about one-fourth in purifying—but the deposit makes a good soap. It is equal to olive oil for burning, and has neither smell nor smoke.

In the Portuguese settlements of Africa, a bitter oil, obtained from a species of *Sterculia*, is employed generally for burning and for fomentations. In India, a semi-solid oil, containing a great quantity of stearine, is made in small quantities from the seeds of *Sterculia fatida*.

An oil called Arco, used for fomentations, is obtained in Africa from the small nut of a shrub called by the natives *Arbe d'Arco*.

The seeds of the custard apple (*Anona reticulata*) yield a mild oil, which has been expressed experimentally, but there is little ground for imagining that it will ever become an article of commerce.

At Trinidad good specimens of oil have been extracted from the Avocado pear (*Persea gratissima*), and were shown some years ago; one from the succulent fruit in a ripe state and the other when green. A gold medal for this was awarded to Mr. H. Cruger, who stated that, easy of manufacture, it is as a lamp oil superior to cocoa-nut and other fixed oils in these very essential points—the brilliancy of the light, the length of time it burns, and the absence of any disagreeable smell. It is very dark-coloured, rather thick, and has a bitter taste, which, unless it can be removed, would render it unavailable for culinary purposes. It is estimated that it can be prepared for market at a cost of 2s. 6d. per gallon; but it is questionable if any extensive supply could be obtained. As an instance of ancient knowledge of modern discoveries, we may point out the fact that this Avocado pear oil has long been used both for food and illuminating purposes on the Spanish Main. It is mentioned as a commercial article in Colonel Cadazzi's statistical report on Venezuela. One conclusion may be derived from this fact, which confirms Mr. Cruger's statement, that the oil is by no means difficult of extraction; generally speaking, wherever you find an article used by the Indian tribes, you may be tolerably confident that Nature yields it without much trouble.

An oil called Umpeque is obtained at Mossamedes, Angola, from a species of *Ximica*.

In Jamaica, a pure, limpid oil has been obtained by Mr. W. J. Marshall, of Portland, from the bread-nut (*Omphalea triandra*); whether it will bear a low degree of temperature without congealing has not been ascertained.

In Jamaica, an oil has been obtained from the seed of the Antidote Cacaoon (*Feuillea cordifolia*). As the oil condenses at as high a temperature as 93° Fahrenheit, it would be valuable for candle-making. The vine grows wild throughout the island, and it might be trained on poles, as hops are in this country, with the greatest ease and the utmost profit. From the seeds of *Feuillea trilobata* and other species, under the local

names of Andiroba and Secua, an oil is obtained in Venezuela, Brazil, and other parts of South America, which is used medicinally for frictions, and also as a lamp oil.

Oil of *Tilifaria pedata*. This plant is known in the Mauritius as *Liane Lejoffi*. The following description, by Mr. Vincent, is taken from Hooker's "Miscellany," vol. ii. p. 155:—"The plant comes from the interior of Africa. The negroes call it in their own language 'Soualli-Koneme.' When growing within reach of trees, it climbs, soon reaching the top of the highest. It seems to prefer a light soil in the vicinity of water. Every fruit weighing about 60 lbs. bears from 200 to 300 seeds, each an inch in diameter and three or four lines thick. The net produce of each fruit may therefore average 50 lbs. weight of kernels, and yield 8 lbs. of excellent oil. It is cultivated at Zanzibar. The pulp of the fruit is intensely bitter." Professor Bernardin, in his "Visit to the Vienna Exhibition," gives some interesting details respecting this oil seed, which he states is eaten as food by the natives. The Portuguese settlers along the Mozambique call them Chataignes, or Castanhas de la Lambare.

Professor Bernardin also draws attention to the wood-oils obtained from some species of *Dipterocarpus*, in French Cochinchina. The finer quality, from *Dipterocarpus alatus*, which could be utilised for making lacquers and varnishes, is worth forty francs the 60 kilos, and the commoner kind, from *D. levis*, used for coating the hulls of ships, is worth thirty francs the 60 kilos.

The late Mr. D. Hanbury drew attention many years ago to this wood oil or gurjun balsam as a substitute in medicine for balsam of capivi. The following is Roxburgh's account of the manner of obtaining it from *Dipterocarpus turbinatus*, an immense tree, native of Chittagong, Tipperah, Pegu, and other places to the eastward of Bengal (*Flora Indica*, ed. Carey, vol. ii. p. 613):—

"This tree is famous over all the Eastern parts of India and the Malay Islands, on account of its yielding a thin, liquid balsam, commonly called Wood Oil, which is much used for painting ships, houses, &c. To procure the balsam, a large notch is cut into the trunk of the tree, near the earth (say about 30 inches from the ground), where a fire is kept up until the wound is charred, soon after which the liquid begins to ooze out. A small gutter is cut in the wood to conduct the liquid into a vessel placed to receive it. The average produce of the best trees during the season is said to be sometimes 40 gallons. It is found necessary, every three or four weeks, to cut off the old charred surfaces and burn it afresh; in large healthy trees abounding in balsam, they even cut a second notch in some other part of the tree, and char it as the first. These operations are performed during the months of November, December, January, and February. Should any of the trees appear sickly the following season, one or more years' respite is given them."

The same author also states that "wood oil" is afforded by *D. costatus* (*D. angustifolius*, W. et A.), *D. alatus*, Roxb., and *D. incanus*, Roxb., the last mentioned being reputed to furnish the largest proportion of the best sort.

Another little-known oil-plant is mentioned in Hooker's "Bot. Misc." Vol. II. p. 261, as follows:—"Visiting Dr. Vanderkamp at his Hottentot village of Besseldorf, he showed me a shrub growing plentifully in the district, the properties of which seem to entitle it to more careful notice. I did not see it in flower, therefore cannot describe its botanical characters. It rises to the height of seven or eight feet, in a close, bushy form. The leaves are about two inches in length, lance-shaped and serrated. The fruit, equalling that of a small grape, is covered with a rough, coriaceous capsule, which opens vertically into two sections, exposing to view a pulpy rose-coloured arillus. Within this envelope, which is of a delicate acid taste, is a kernel the size of a large pea, covered with a thin shell, and rivaling in taste and flavour the finest filbert. By bruising these kernels and boiling them in water, the Boors procure a large quantity of oil which they apply to various economical purposes, and I have not the least doubt that if the fruit were subjected in a skilful manner to the press, it would yield an oil equal in flavour to the finest extracted from the olive."

Argan Oil. The nuts of *Argania sideroxylon* yield a valuable oil. The husks are greedily eaten by cattle, and the wood is hard and useful for many domestic purposes. The British Vice-Consul at Mogadore gives the following account of it:—"The Argan tree grows more or less throughout the States of Western Barbary, but principally in the province of Haha, and

south of Mogador. The soil on which it is found is light, sandy, and very stony. It is usually found upon the hills, which are barren of all else, and where irrigation is impossible. I should imagine, from the appearance of some of the trees, that they are from one to two hundred years old; and a remarkably large one in this neighbourhood, I should say, is at least three hundred. This tree measures round the trunk twenty-six feet; at the height of three feet it branches off (one of them measures eleven feet near the trunk); these branches rest upon the ground at about fifteen feet from the trunk, and again ascend; the highest branch of this tree is not more than sixteen to eighteen feet; the outer branches extend to a circumference of 220 feet; this is the largest I am aware of. The system of propagation in this vicinity is mostly by seed; when sowing this, a little manure is placed with it, and it is well watered until it shoots, from which period it requires nothing further. It bears fruit at from three to five years, which ripens from May to August (according to the situation of the tree). The roots extend a great distance under ground, and shoots make their appearance at intervals, which are allowed to remain, thus doing away with the necessity for transplanting or sowing. As the fruit ripens, herds of goats, sheep, and cows are taken out; a man beats the tree with a long pole, and the nuts fall, and are devoured voraciously by the cattle. In the evening they are driven home, and when comfortably settled in their yard, they commence chewing the cud and throw out the nuts, which are collected such morning as soon as the cattle have departed upon their daily excursion. I have heard it remarked that the nut passes through the stomach of the animal; but this is only a casualty, and not a general rule. Large quantities are collected by women and children, which are well dried; the hull is taken off, and stored for the camels and mules travelling in the winter. They are considered very nutritious. The process of extracting the oil is very simple. The nuts are cracked by the women and children (and not a few fingers at the same time, owing to the want of proper tools, for the nuts are very hard, and a stone is the only implement used). The kernels are then parched in a common earthen vessel—ground in handmills of this country—then put in a pan—a little cold water sprinkled upon them; then it is well worked by the hand (much the same as kneading dough) until the oil separates itself, when the refuse is well pressed in the hand, which completes the process. The oil is let stand, and the sediment removed; the cake (in which a great deal of oil remains, owing to the want of a proper press) is generally given to the milch cows or goats. I never heard of any part being used as manure, but I have no doubt it would form an excellent one. Some of these Argans are in clusters, others single trees."

At Port St. Stefano, in Tuscany, there is a manufactory of oil of *Pistacia lentiscus*, which is commonly used for lighting, and even for culinary purposes. When thus applied, it is deprived of its offensive smell by heating it with crumbs of bread. The larger seeds of the buffalo tree (*Pyrularia oleifera*) yield a fixed oil.

Hickory nut oil (*Carya alba*), considered equal to the best lard or sperm oil for burning and machinery, has been made in Ohio, United States. It continues in a fluid state at a very low temperature, and is used in very delicate machinery, and, when properly refined, could be employed by watchmakers. The pig nut (*C. glabra*) is preferred for expressing, on account of its thin shell and greater abundance. The oil manufactured from the ordinary shell-bark, and large sweet hickory nuts, might come into general use for the table.

The seeds of the lime tree (*Tilia parviflora*) contain about forty-eight per cent. of their weight of a greasy, non-drying oil analogous to that from almonds.

Tung oil is made in China from the berries of *Dryandra cordata*. The so-called bean oil, or oil of peas, is from the seeds of *Dolichos viridis*. An excellent table oil is expressed from the seeds of *Camellia oleifera*. It was for a long time undetermined what this so-called "tea oil" was, as it is comparatively unknown in Europe. It is, when fresh, quite free of smell, from a pale yellow tint, without any sediment when long kept. It resists a cold of 40° F., but at 30° becomes like an emulsion. Its density is 927. It is insoluble in alcohol, sparingly soluble in ether, and burns with a remarkably clear white flame. This oil might prove an important article of commerce in the East, because in its properties it is superior to coconut oil and the various other oils prevalently used for burning or as oleaginous condiments in Asiatic countries.

Maize oil. The grain of maize, or Indian corn, contains from six to twelve per cent. of oil, but that of southern growth contains less than northern. The Tuscarora is one of the varieties which do not contain oil. Rice corn contains the most, popcorn ranks next, Canada corn third, and brown corn next. There is a curious difference observable in the mode of distribution of the oily and glutinous parts of Indian corn, the southern variety always having it on the sides of the elongated seed, while the starch projects quite through the grain to its summit, and by its contractions in drying produces the peculiar pit or depression in this variety of grain. The Burden corn, which contains a very fine white oil, is still more remarkable for this arrangement. Indian corn is much more digestible by man after extrication of the oil, though not so fattening to animals that can digest oil. The uses of oil in Indian corn are manifold. It is obviously to protect the grain from rapid decomposition in the soil from long-continued wet, and to retain a portion of food until needed by the young plant, as the oil is uniformly the first portion of the grain taken up. It serves to keep meal from souring readily, as flint corn meal will keep sweet for years, even when put up in large quantities, while the Tuscarora meal will sour in a short time. The oil, when yellow, shows its colour through a transparent epidermis, or hull. The Golden Sioux, a twelve-rowed variety, is coloured by the oil, in which variety the oil is transparent and colourless, and the epidermis being also free from colour, the meal is white.

PREPARED CASTOR OIL.*

By CLAY W. HOLMES.

HAVING tried all the methods advised by different writers for disguising the taste of castor oil, and feeling that a mode was possible which would neither conflict with elegant pharmacy or its action on the human system, I set about a series of experiments. The final result of my labours is herewith presented to the members of the Association, with the statement that the formula in all its bearings is entirely original with me, never having seen anything of the kind anywhere.

B Pulv. Gum. Acaciaz, 5j.
Syrup,
Glycerine, aa ffj.
Aqua, 5℥i.
Ol. Ricini, 5℥j.
Ext. Vanille,
Sp. Vini Gal, aa 5℥j.
Old Cinnamon, ʒss, gtt. v.
Misco secundum artem,

This gives an elegant, permanent emulsion, representing fifty per cent. of castor oil, and with the dose doubled, has the same happy effect as the natural oil.

I have sold large quantities of it during the past year, and in every instance have heard good reports from it. In numerous instances children who could by no means be induced to take the plain oil have taken this preparation without the least hesitation. I have watched its systematic effects closely, experimenting in my own family, that I might be satisfied of its worth before recommending it to my patrons. The result justifies me in offering it for the good of the craft, hoping all who try it may find it as worthy of favour as I have.

BRITISH ASSOCIATION.

THE forty-fifth meeting of the British Association will be held at Bristol, commencing August 25. August 1 has been fixed as the last day for receiving papers to be read. Up to August 19, tickets can be had by members on writing to Professor A. W. Williamson, University College. After that date a personal application is required. The reception room, Bristol, will be opened on Monday, August 23. The terms of membership are:—Life members, a composition of 10l.; annual members, 2l. the first year, and 1l. every succeeding year; Associates for the year, 1l. Application to be made at the office of the Association, 29 Albemarle Street, W.

* From the Proceedings of the American Pharmaceutical Association.

THE IRISH PHARMACY BILL.

THE title of this bill is "A Bill to institute a Pharmaceutical Society and to regulate the qualifications of pharmaceutical chemists in Ireland, and to establish certain relations between the Pharmaceutical Societies of Great Britain and Ireland." It is introduced by the Chief Secretary and the Attorney-General for Ireland. It runs as follows:—

Whereas by an Act passed by the Parliament of Ireland in the thirty-first year of the reign of His Majesty George the Third, intitled "An Act for the more effectually preserving the health of His Majesty's subjects, for erecting an Apothecaries' Hall in the city of Dublin, and regulating the profession of an Apothecary throughout the Kingdom of Ireland," (in this Act referred to as "the Act of 1791,") it is enacted that no person shall open shop or practise the art and mystery of an apothecary within the Kingdom of Ireland until he shall have been examined as to his qualification and knowledge of the business by the persons and in the manner by the said Act prescribed, and shall have received a certificate to open shop or follow the art and mystery of an apothecary within the Kingdom of Ireland from the Governor and Directors of the Apothecaries' Hall of the city of Dublin:

And whereas a great deficiency exists throughout Ireland of establishments and shops for the sale of medicines and compounding of prescriptions, and great inconvenience thereby arises to the public in many parts of the country:

And whereas to remedy such inconvenience it is expedient to amend the Act of 1791, and to enable persons who, although they do not desire to practise the art and mystery of an apothecary, desire and are qualified to open shop for the retailing, dispensing, and compounding of poisons and medical prescriptions, to keep open shop for the purposes aforesaid:

And whereas for the purposes aforesaid it is expedient that provisions such as are in this Act contained should be made for the formation of a Pharmaceutical Society in Ireland, and for the examination of persons desiring to keep open shop for the purposes aforesaid, and for the registration of such of the said persons as may be found, on examination, to possess a competent practical knowledge of pharmaceutical and general chemistry and other branches of useful knowledge as fit persons to keep open shop for the dispensing and compounding of prescriptions of duly qualified medical practitioners:

And whereas it is expedient that persons registered as pharmaceutical chemists in Great Britain should be entitled to be registered as pharmaceutical chemists in Ireland, and that persons registered as pharmaceutical chemists in Ireland should be entitled to be registered as pharmaceutical chemists in Great Britain, and that with respect thereto provisions such as are in this Act contained should be made:

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as "The Pharmacy Act (Ireland), 1875."

Constitution and Incorporation of the Pharmaceutical Society of Ireland.

2. A society to be called "The Pharmaceutical Society of Ireland" shall be constituted as hereinafter mentioned, and such society shall by such name be a body corporate, and have perpetual succession and a common seal, and sue and be sued, and have power and authority to take, purchase, and hold land for the purposes of this Act.

3. The following persons, that is to say, A. B., C. D., E. F., and all other persons who shall be qualified and elected in the manner prescribed by this Act shall be members of the Pharmaceutical Society of Ireland, and the said persons in this section specifically named as such members as aforesaid shall constitute and be the first council of the Pharmaceutical Society of Ireland.

There shall be a president and vice-president of the said society, and the said A. B. shall be the first president and the said C. D. the first vice-president of the said council.

4. Every person who shall be registered under this Act as a pharmaceutical chemist shall be qualified to be elected as a member of the said Pharmaceutical Society; and every person so registered and elected a member of the said Pharmaceutical

Society shall be qualified to be elected, and when elected to act, as a member of the council of the said Pharmaceutical Society.

5. The persons by this Act named as president and vice-president of the said council, and their successors in such offices respectively, shall hold the office of president and vice-president respectively during such time as they shall continue to be members of the said council, and in case of any vacancy in the office of president or vice-president of the said council caused by such president or vice-president ceasing to be a member of the said council, or by the resignation or incapacity of any such president or vice-president, such vacancy shall be filled by the election of some member of the said council to fill such vacancy.

6. The members of the said council shall go out of office by rotation in the following manner, viz.:—On the first Monday of October in the year one thousand eight hundred and seventy-six one-third of the members of such council shall go out of office, and on the first Monday of October in the following year another third of the members of such council shall go out of office, and on the first Monday of October in the following year the remainder of the members of such council shall go out of office; and on the first Monday of October in every subsequent year one-third of the members of such council (being those who have been longest in office) shall go out of office; and in each instance the places of the retiring members of such council shall be supplied by the election by the members of the said Pharmaceutical Society on the first Monday in October in each year of a like number of their body to act as members of the said council in place of the retiring members.

7. In order to determine the rotation by which the first members of the said council shall go out of office, the said council shall at their first meeting under this Act form a rotation list, and at such meeting the chairman shall write the names of all the members on separate slips of paper, all as nearly as may be of equal size, and having folded them up in the same manner, he shall put them into a ballot-box, and shall in the presence of the meeting draw out such slips of paper in succession, and the names upon the slips so drawn shall be written by the chairman in a list in the order in which they are drawn; and every such list shall be kept among the papers of the said council, and the names therein shall be numbered consecutively, and the members of the said council shall retire from office in the order in which their names appear on such list, in the proportions in this Act mentioned.

8. Every member of the said council going out of office by rotation may be re-elected, and after such re-election he shall with reference to going out by rotation be considered as a new member.

9. If any extraordinary vacancy shall be occasioned in the said council the said council shall, on a day to be fixed by the chairman of the said council (such day not to be later than ten days after such vacancy) elect another person to supply such vacancy, and every person so elected shall continue a member of the said council until the time at which the person in the room of whom he was chosen would regularly have gone out of office, and he shall then go out of office, but shall be capable of immediate re-election.

10. Elections of members of the said council, and of president and vice-president thereof, under this Act, shall be held and the voting and other proceedings in the case of a contest shall be conducted in the manner prescribed by regulations made in pursuance of this Act.

11. At a meeting of the said council the president, or in his absence the vice-president, shall act as chairman; and in case the president and vice-president shall both be absent, one of the members present shall be elected chairman by the majority present.

At all meetings of the said council the questions there considered shall be decided by a majority. In case of an equal division, the chairman shall, in addition to his own vote, have a casting vote.

No business shall be transacted at any meeting of the said council unless — members of the council be present, and all the powers under this Act vested in the council may be exercised by any — or more of the council present at any meeting of the council.

12. The council of the said Pharmaceutical Society shall hold their first meeting within six months after the passing of this Act at such place in the city of Dublin, at such hour, and on such day as the Chief Secretary to the Lord Lieutenant of Ireland may respectively order and appoint, and they may adjourn such meeting from time to time as shall seem fit, and at such

first meeting, or some adjournment of the same, they shall make regulations with respect to the matters following:—

- (1.) The meetings and other proceedings of the said council;
- (2.) The times at which and the subjects and modes in which examinations under this Act are to be held and conducted;
- (3.) The times at which and the mode in which elections of members of the said Pharmaceutical Society are to be held and conducted;
- (4.) The mode in which elections of members of the council, and of president and vice-president thereof, are to be held and conducted.
- (5.) The fees to be charged for examination, license, and registration under this Act, and the entrance fees and annual subscriptions to be paid by members of the said Pharmaceutical Society, and the application of the same, and of all moneys received by the treasurer under this Act;
- (6.) The duties of the registrar, treasurer, clerks, and other subordinate officers, and the manner in which the same shall be discharged, and the salaries to be paid to such officers respectively; and
- (7.) Generally for all such other matters as may be necessary for the due execution of this Act.

The said council may from time to time, at any meeting of the council held at any time after the expiration of six months after such first meeting, revoke or alter any such regulation, and make new regulations instead thereof or in addition thereto.

Every such regulation shall be subject to the approval of the Lord-Lieutenant and Privy Council in Ireland, and shall be of no force or effect until the same shall be so approved, and notice of such approval shall be published in the *Dublin Gazette*.

All regulations made under the authority of this Act and approved as aforesaid shall be laid before both Houses of Parliament within twenty-one days after the same shall be made, if Parliament be sitting at such time, or if Parliament be not sitting, within twenty-one days after the commencement of the next session of Parliament after the making thereof.

All such regulations when so approved shall be of the like force and effect as if they had been enacted in this Act.

General Provisions.

13. The following provisions of this Act shall not take effect until after the publication in the *Dublin Gazette* of the notice of the approval of the regulations made at the first meeting of the said council.

14. The said council may from time to time appoint a fit and proper person as a registrar under this Act, and shall have power to remove any such registrar from the said office, and may also appoint and remove from time to time a treasurer, and such clerks and other subordinate officers as may be requisite for carrying out the purposes of this Act, and also to pay suitable salaries to the said registrar, treasurer, clerks, and officers.

15. For the purpose of ascertaining the qualification of persons, not being persons registered as pharmaceutical chemists on the register of pharmaceutical chemists for Great Britain, who may be desirous of keeping open shop for the retailing, dispensing, or compounding poisons or medical prescriptions and being registered as pharmaceutical chemists under this Act, the said council shall cause examinations to be held at such times and in such manner as may be prescribed by regulations made in pursuance of this Act, and the said council shall appoint examiners to conduct the same: Provided always, that no person shall conduct any examination for the purposes of this Act until his appointment has been approved by the Lord Lieutenant and Privy Council in Ireland; and such appointment shall not in any case be in force for more than five years.

All persons desiring to be registered as pharmaceutical chemists under this Act may at any such examination present themselves for examination and they shall be examined with respect to their knowledge of the Latin and English languages, of arithmetic, of botany, of materia medica, of pharmacology and general chemistry, of practical pharmacy, of the British Pharmacopoeia, and of such other subjects as may from time to time be prescribed by any regulations made in pursuance of this Act; but such examination shall not include the theory and practice of medicine, surgery, or midwifery, or any branch of medicine or surgery; and the examiners appointed by the council are hereby empowered to grant or refuse to such persons, as

in their discretion may seem fit, certificates of competent knowledge and qualification and skill to be registered as pharmaceutical chemists under this Act: Provided always, that in case of rejection a rejected candidate shall not present himself for re-examination until after six months after such rejection.

16. Every person who shall be duly examined in the subjects prescribed by this Act, and who shall be certified by the examiners to be qualified to act as a pharmaceutical chemist, and every person registered as a pharmaceutical chemist in the Register of Pharmaceutical Chemists for Great Britain, upon giving to the registrar such reasonable proof thereof as may be required under any regulations made by the council of the Pharmaceutical Society in that behalf, shall, upon payment of the proper fees and charges, be entitled to be registered under this Act as a pharmaceutical chemist.

17. For every examination, license, and registration, such reasonable fees or charges shall be paid as shall from time to time be fixed and determined by any regulation or regulations to be made by the said council in pursuance of this Act; provided always, that such fees or charges shall at all times be equal, as nearly as may be, to the fees fixed and determined for like purposes by any bylaw or bylaws made by the Pharmaceutical Society of Great Britain, and such fees shall be paid to the treasurer, and shall by him be applied to the purposes of this Act in manner prescribed by such regulations.

18. Every person registered as a pharmaceutical chemist on the register of Pharmaceutical Chemists for Ireland shall, upon giving to the Registrar of the Pharmaceutical Society of Great Britain such reasonable proof thereof as may be required under any regulations or orders made by the Council of the Society in that behalf, and upon payment of the proper fees and charges, be entitled to be registered as a pharmaceutical chemist under the Act passed in the session of Parliament held in the fifteenth and sixteenth years of the reign of her present Majesty, intitled "An Act for regulating the Qualifications of Pharmaceutical Chemists," and any Act amending the same, without being required to pass any further or other examination, and on such registration shall be entitled to all the rights and privileges and be subject to all the liabilities of pharmaceutical chemists under the said Acts.

19. The registrar to be appointed under or by virtue of this Act shall from time to time make out and maintain a complete list (to be called the "Register of Pharmaceutical Chemists for Ireland") of all persons registered as pharmaceutical chemists under this Act, and in such register the names shall be in alphabetical order according to the surnames, with the respective residences, in the form set forth in the schedule to this Act annexed, or to the like effect, and shall keep a proper index of such register, and all such other lists and books as may be required by the said council, and as may be necessary for giving effect to the regulations of the said council and to the provisions of this Act.

20. It shall be the duty of the registrar to keep the said register corrected, and to erase the names of all registered persons as and when they shall die, and from time to time to make the necessary alterations in the addresses of the persons registered under this Act; and to enable the registrar duly to fulfil such duties, it shall be lawful for him to write a letter to any registered person, addressed to such person according to his address on the register, to inquire whether he has ceased to carry on business or has changed his residence, such letter to be forwarded by post as a registered letter, according to the post-office regulations for the time being, and if no answer be returned to such letter within the period of six months from the sending of the letter, a second of similar purport shall be sent in like manner, and if no answer be given thereto within three months from date thereof it shall be lawful to erase the name of such person from the register; provided always, that the same may be restored by direction of the said council, should they think fit to make an order to that effect.

21. No name shall be entered in the said register, except of persons authorised by this Act to be registered, nor unless the registrar be satisfied by the proper evidence that the person claiming is entitled to be registered; and any appeal from the decision of the registrar may be decided by the said council; and any entry which shall be proved to the satisfaction of the said council to have been fraudulently or incorrectly made may be erased from or amended in the register under an order in writing of the said council.

22. The registrar shall, in the month of January in every year, cause to be printed, published, and sold correct copies of

the register of pharmaceutical chemists in alphabetical order according to the surnames; and a printed copy of such register for the time being in force, purporting to be so printed and published as aforesaid, or any extract therefrom, or from the original register, certified under the hand of the said registrar, and countersigned by the president or two members of the said council, shall be evidence in all courts and in all proceedings that the persons therein specified are registered according to the provisions of this Act, and the absence of the name of any person from such copy of the register shall be evidence, until the contrary shall be made to appear, that such person is not registered according to the provisions of this Act.

23. Any registrar who shall wilfully make or cause to be made any falsification in any matter relating to the said register, and any person who shall wilfully procure or attempt to procure himself to be registered under this Act, by making or producing, or causing to be made or produced, any false or fraudulent representation or declaration, either verbally or in writing, and any person aiding or assisting him therein, shall be deemed guilty of a misdemeanour, punishable by fine or imprisonment, and shall on conviction thereof be sentenced to be imprisoned for any term not exceeding *twelve months*.

24. Every registrar of deaths in Ireland, on receiving notice of the death of any person registered under this Act as a pharmaceutical chemist, shall forthwith transmit by post to the registrar under this Act a certificate, under his own hand, of such death, with the particulars of the time and place of death, and on receipt of such certificate the said registrar under this Act shall erase the name of such deceased pharmaceutical chemist from the register, and shall transmit to the said registrar of deaths the cost of such certificate and transmission, and may charge the cost thereof as an expense of his office.

25. From and after the it shall be unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons within the meaning of the Act of the session of the thirty-third and thirty-fourth years of the reign of Her present Majesty, chapter twenty-six, or medical prescriptions, or to assume or use the title of Pharmaceutical Chemist, or Pharmacist, or Dispensing Chemist, in any part of Ireland, unless such person shall be registered as a pharmaceutical chemist under this Act; and any person acting in contravention of this enactment, or compounding any medicines of the British Pharmacopoeia, except according to the formularies of the said Pharmacopoeia, shall for every such offence be liable to pay a penalty of *five pounds*; but nothing in this section contained shall prevent any person from being liable to any other penalty, damage, or punishment to which he would have been subject if this Act had not passed: Provided always, that nothing in this Act contained shall affect any licentiate of the Apothecaries' Hall of the city of Dublin, or any person who shall have been registered as a legally qualified medical practitioner before the passing of this Act, or who shall be registered as a legally qualified practitioner after the passing of this Act, and who, in order to obtain his diploma, shall have passed an examination in pharmacy.

26. Nothing in this Act contained shall extend to or interfere with the making or dealing in patent medicines, or with the business of wholesale dealers in supplying poisons in the ordinary course of wholesale dealing, or of chemists or druggists who are practising as such in Ireland upon their own account at the time of the passing of this Act, save and except the provisions against the compounding of medical prescriptions, and against the preparing of any medicines of the British Pharmacopoeia except according to the formularies of the said Pharmacopoeia; and nothing in this Act contained shall prevent any person who is a member of the Royal College of Veterinary Surgeons of Great Britain, or holds a certificate in veterinary surgery from the Highland and Agricultural Society of Scotland, from dispensing medicines for animals under his care.

27. Upon the decease of any person registered under this Act as a pharmaceutical chemist, actually in business at the time of his death, it shall be lawful for any executor, administrator, or trustee of the estate of such pharmaceutical chemist to continue such business, if and so long only as such business shall be *bona fide* conducted by a duly qualified assistant, being a pharmaceutical chemist registered as such under this Act.

28. Registration under this Act shall not entitle any person so registered to practice medicine or surgery, or any branch of medicine or surgery.

29. The Lord Lieutenant and Privy Council may direct the

name of any person who is convicted of any offence against this Act which in their opinion renders him unfit to be on any register under this Act to be erased from such register, and it shall be the duty of the registrar to erase the same accordingly.

30. Every penalty recoverable under the provisions of this Act shall be recoverable in a summary way, with respect to the police district of Dublin metropolis subject and according to the provisions of any Act regulating the powers and duties of justices of the peace for such district or of the police of such district, and with respect to other parts of Ireland, before a justice or justices of the peace sitting in petty sessions, subject and according to the provisions of The Petty Sessions (Ireland) Act, 1851, and any Act amending the same.

One third of every sum of money recovered as a penalty under this Act shall be paid to the person who shall be the means of bringing to justice any person committing any offence against any of the provisions of this Act, and the remainder of such sum shall be paid to the treasurer, and shall by him be applied to the purposes of this Act in the manner prescribed by any regulation made in pursuance of this Act.

31. From and after the passing of this Act so much of the Act of 1791 as is inconsistent with the provisions of this Act shall be and the same is hereby repealed.

Schedule.

Name.	Residence.	Date of Registration.
A.B.	Grafton Street, Dublin.	Jan. 10th, 187.
C.D.	Patrick Street, Cork.	March 4th, 187.
E.F.	Corn Market, Belfast.	June 15th, 187.

DRUGGING OF ANIMALS BILL.

THE following is a copy of the Bill introduced by Sir John A. Actley into the House of Commons, and endorsed also by Mr. Chaplin and Mr. Rowland Winn. It is now awaiting second reading.

Whereas it is expedient to make provision for putting an end to the practice of administering poisonous drugs and other compounds to horses and other animals by disqualified persons, and without the knowledge and consent of the owners of such horses and animals:

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. From and after the passing of this Act if any person other than a member of the Royal College of Veterinary Surgeons of Great Britain, or any person acting under his direction, shall give any horse or other animal any one or more of the several articles named or described either in Part I. or Part II. of the Schedule A. to this Act without the consent of the owner of such horse or animal, such person shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable for each offence to a penalty not exceeding *ten pounds*, or to be sentenced to be imprisoned, with or without hard labour, for any term not exceeding *three calendar months*; but nothing in this Act contained shall exempt any person from any heavier punishment to which he might be liable under any other Act, provided that no person shall be punished twice for the same offence.

2. The several articles named or described in Part II. of the Schedule A. to this Act shall be deemed to be poison within the meaning of this Act.

3. It shall be unlawful to sell any poison, either by wholesale or by retail, unless the box, bottle, vessel, wrapper or cover in which such poison is contained be distinctly labelled with the name of the article and the word poison, and with the name and address of the seller of the poison, and it shall be unlawful to sell any poison to any person unknown to the seller, unless introduced by some person known to the seller; and on every sale of any such article the seller shall, before delivery, make or cause to be made an entry in a book to be kept for that purpose, stating, in the form set forth in Schedule B. to this Act, the date of the sale, the name and address of the purchaser, the name and quantity of the articles sold, and the purpose for which it is stated by the purchaser to be required, to which entry the signature of the purchaser and of

diacetyl-alizarin, dyes fabrics mordanted with alumina of an orange colour, whilst the amido-alizarin obtained from it by reduction gives a fine purple. 8. "On Some Metallic Derivatives of Coumarin," by Mr. R. Williamson. 9. "On the Action of Dilute Mineral Acids on Bleaching Powder," by F. Kopper. The next meeting, the last of the session, will take place on Thursday, June 17, when there will be a large number of papers.

THE MIDLAND COUNTIES CHEMISTS' ASSOCIATION AND THE IRISH PHARMACY BILL.

ON May 31 a special meeting of the Executive Council of the Midland Counties Chemists' Association was held at their rooms, New Street, Birmingham, to take into consideration the Irish Pharmacy Bill. Mr. T. Barclay, of Birmingham, presided. After a lengthy discussion it was unanimously resolved that the subjoined resolution should be sent to the following members of Parliament, namely, Messrs. Bright, Dixon, Muntz, Newdegate, Bromley-Davenport, H. Allsop, Walker, Bass, and S. C. Allsop. The resolution is as follows:—"That the proposed measure, in its present form, is prejudicial to the interests of the public, and unjust to the chemists of Great Britain, as it would give undue advantages to Irish chemists who might desire to commence business in Great Britain, and, at the same time, mislead the public as to their qualifications. The Council would strongly urge the extension to the whole kingdom of the laws which now within Great Britain regulate the qualifications of chemists and also of the sale of poisons, and, therefore, earnestly request that you will oppose the bill in its present form."—*Birmingham Morning News*.

DILIGENT IN BUSINESS.

AN American paper illustrates the severity of the struggle for existence by the following narrative, which it entitles "The Lightning Rod Man":—

He drove his team close up to the fence, got down, and rapped at the door. The widow Gilkens opened it, when he said: "Mrs. Gilkens, I am cognisant of the circumstances by which you are at present surrounded, left as you are to trudge down the journey of life through a cold and heartless world—no longer sustained and encouraged by the noble one to whom you gave the treasures of your heart's affection, and bowed down by the manifold cares and responsibilities incidental to the rearing of eight small children on forty acres of sub-carboniferous limestone land; yet, Mrs. Gilkens, you are aware that the season is now approaching when dark, dismal, dangerous clouds at frequent intervals span the canopy of heaven; and when zigzag streaks of electricity dart promiscuously hither and thither, rendering this habitation unsafe for yourself and those dear little ones; hence, therefore, let me sell you a copper wire, silver tipped, and highly magnetic lightning rod."

The woman staggered back a few paces and yelled: "Narcis! unfasten old Cronch!" In another instant a savage bull-dog came darting round the corner of the house with bristles up, thirsting for gore. The dog had already mangled a machine agent and a patent soap man, and was held in great esteem by the better class of citizens for his courage and service; but when his eye met the hard, penetrating gaze of Mr. Parsons, his chops fell, and he slunk off and hid in the currant bushes. Then the man said: "My dear lady, you seem to be a little excited. Now if you will allow me to explain the probably inestimable—"

"Dern ye, I know what will start ye," said Mrs. Gilkens, as she reached under some bed clothing and brought forth a horse pistol; but owing to the shattered condition of her nerves her aim was unsteady, and the charge of buckshot missed, save where a few scattered ones struck his cheek and glanced off. A hard metallic smile spread over his countenance, as he leaned his shoulders against the door frame and again commenced: "My dear madam, such spasmodic manifestations of your disinclination to make a judicious investment of a few paltry dollars—"

"Hi—eo!" shrieked the widow, and collapsed into a kind of jerking swoon, and before she had recovered a highly magnetic lightning rod decorated her humble domicile, and Parsons had the blank note filled out already for her signature.

Obituary.

BARNES.—May 9, Mr. John Hogan Barnes, chemist and druggist, of Liverpool, aged 40.

CAMERON.—May 16, Mr. William Cameron, pharmaceutical chemist, of Kelso, aged 43.

CASTELL.—May 14, Mr. Thomas Barford Castell, chemist and druggist, of Plaistow, Essex, aged 46.

CRAFTON.—May 28, Mr. Ralph Caldwell Crafton, pharmaceutical chemist, of Croydon, aged 79.

CVETIS.—June 2, Mr. Frederick Curtis, pharmaceutical chemist, of Baker Street, London.

DENGATE.—April 7, Mr. William Dengate, chemist and druggist, of New Shoreham, aged 63.

ELLIS.—April 30, Mr. George Henry Ellis, pharmaceutical chemist, of Finsbury Pavement, London, aged 74.

GORRIE.—June 9, at the house of his brother, Alexander Gorrie, chemist, Kirkcaldy, John P. Gorrie, chemist, 76 St. John, Perth, aged 26.

JACKSON.—May 30, Mr. James Jackson, chemist and druggist, of Heywood, Lancashire, aged 46.

MANNING.—March 10, Mr. Thomas Davys Manning, pharmaceutical chemist, of Yeovil, aged 78.

PITTS.—May 17, Mr. Joseph Pitts, chemist and druggist, of Windhill, Yorkshire, aged 62.

RAYNES.—April 28, Mr. William Augustus Raynes, chemist and druggist, of Bethnal Green, aged 64.

TAYLOR.—May 19, Mr. William Thomas Taylor, chemist and druggist, of Bristol, aged 42.

WILLIAMS.—March 24, Mr. Thomas Williams, chemist and druggist, of Penrhyn, Mon., aged 57.

WILSON.—March 15, Mr. Thomas Davison Wilson, chemist and druggist, of Newcastle-on-Tyne, aged 26.

WYMAN.—May 26, Mr. John Wyman, pharmaceutical chemist, of Fore Street, London, aged 66.

Political as well as other motives have lately led to a revision of the denominations of several of the streets in Paris, and we are gratified to note that the Municipal Council have continued their time-honoured custom of perpetuating the names of deceased worthies in the scientific world. Among others we mention—

Impasse Robiquet.—M. Robiquet was a celebrated pharmaceutical chemist.

Rue Pelouze.—M. Pelouze was a distinguished French chemist, for a long time director of the Paris Mint.

Rue Morse.—Mr. Morse was the well-known telegraphic inventor, of American birth.

Rue Ponchet.—M. Ponchet was a distinguished naturalist-chemist, well known for his labours in regard to spontaneous generation.

Rue Lalande.—M. Lalande, a celebrated astronomical savant.

Rue Lamarck (naturalist).

Rue Becquerel (savant).

Rue Orfila, named after the well-known chemist Orfila, of Spanish birth, but a naturalised French citizen. For a long time Orfila was the senior member of the Faculty of Medicine in Paris.



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Belgium ..	124 francs.	Java ..	6 florins.
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Buenos Ayres ..	24 dollars.	Mexico ..	24 dollars.
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Chili ..	24 dollars.	Monte Video ..	24 dols. specie.
China ..	24 dollars.	Portugal ..	24 milreis.
Cuba ..	24 dollars.	Prussia ..	10 marks.
Demerara ..	24 dollars.	Russia ..	34 roubles.
Denmark ..	44 R. dollars.	South Africa ..	10s.
France ..	10 francs.	Spain ..	24 dols. specie.
Germany ..	10 marks.	Sweden ..	24 dols. specie.
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Holland ..	6 guildens.	West Indies ..	10s.

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"WITH regard to the Silicated Carbon Filters, I have made many experiments upon them, and have been astonished at the energy and rapidity of their action. I passed through a small Filter of this make some of the worst description of water supplied by the London Water Companies, and found it, after filtration, to have become as pure as the very best London water. My experiments show that the Filter exercises a decomposing action—a chemical action—on the Organic impurities in Drinking Water. I have no doubt that water, which is dangerous from the Organic Matter contained in it, becomes safe on passing through the Silicated Carbon Filter. A point of some importance, shown by my experiments, is that a Second Filtration still further improves the quality of Drinking Water. After being in use for a considerable period, Filters lose their power and require renovation. I have found that the passage of a little Hot Water through the Silicated Carbon Filter, and afterwards blowing a little air through it, restores its power."

J. ALFRED WANKLYN, M.R.C.S., London,
Formerly Professor of Chemistry in the London Institution;
Joint Author of a Book on Water Analysis, and of the
Ammonia Process.

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THE IRISH PHARMACY BILL.

IT has not unfrequently been a subject of discussion whether a government should be regarded as in possession of a conscience, or whether it should be looked upon as merely a machine, set to grind out "the greatest good for the greatest number" in some not quite comprehensible but apparently fatalistic manner. The Conservative party has always stoutly insisted on the existence of a conscience in public affairs, and on State occasions the sacred impersonality has been enthroned with due solemnity. But in the matter of this little Irish Pharmacy Bill, which can never become a public question, the present government seems quite content to abandon both conscience and policy, for no reason that one can see except for the mere pleasure of running wild for once in a way.

The Pharmacy Bill introduced by the Chief Secretary for Ireland proposes to establish an independent Pharmaceutical Society in Dublin, in accordance with the desires of Irish chemists themselves. It proposes to admit men into full communion with this society at one grade, by one examination, and it proposes to confer on those admitted the title of "Pharmaceutical Chemist." Why this title in particular? For the very good reason that a certain substantial value attaches to it in consequence of the labours of the British Pharmaceutical Society during the past forty years. More than this, the bill proposes to give to Irish pharmaceutical chemists thus manufactured not only the title, but the tangible benefits resulting from its possession. That is, they may pass their examination in Dublin, an examination over which nobody in the rest of the kingdom will have any control whatever, then come over here, and by payment of a small sum of money to the English society, claim the right of commencing business in this part of the Empire as a pharmacist of the highest rank.

This is as cool a piece of legislation as has often been sug-

gested. Cool, indeed, is hardly the word for it. It handles distinctly private property with a disregard of the relative claims of owner and candidate in a manner which would bring it under the description of felony if the *locals* of the discussion happened to be at the Old Bailey instead of Whitehall. For surely a title of any kind gained by personal exertion and merit ought to be one of the securest forms of property. But what can be a more wanton attack on the security of such property than to hand it over to A.B., C.D., E.F., and the rest, in another part of the same kingdom, to distribute among their friends how and as freely as they please?

The Government has no more moral right to take hold of the title "Pharmaceutical Chemist," which is the peculiar and special possession of the Pharmaceutical Society of Great Britain, and present it to a certain number of people desirous of having it in Ireland, than it would have to take the private estates of Sir Michael Hicks-Beach himself and parcel them out among a select group of Irish gentlemen with no estates themselves. The case is stronger, even; for if it were essential that all Irishmen must be provided with an estate, it is clear that somebody must be dispossessed, for the Government cannot create new lands. But it can create a new title if necessary, and, according to our views of justice, it should do so rather than infringe the rights of legally recognised possessors.

Protests something to this effect have been freely laid before the Chief Secretary, and to do him justice he seems to understand pretty clearly what he is about. But he chooses to consider this an appropriate occasion for the display of a little Bismarckian vigour. Therefore he has put his foot down and expressed his resolve to pass the bill in its integrity, only he will graciously devise some plan which shall keep the funded property of the British society from the touch of the invader. We confess we do not see the logic of that.

Of course it may happen that A.B., C.D., E.F., &c., who are to constitute the first council of this society, and all their successors, may carry out their duties conscientiously and honourably, though this is a liberal presumption, particularly when we remember that fees from candidates will be for some years the chief source of income for the new society. But, if they do, that will not affect the principle of the bill, nor the fact that they will be legally authorised to upset the work of the elder society whenever it may be their good pleasure so to do.

It is curious, and, we think, much to be regretted, that three able members of the Pharmaceutical Council, trustees of the rights of pharmaceutical chemists throughout the country, have concluded that this bill need not be opposed *in toto*. This want of unanimity will probably settle the matter, and Messrs. Schacht and Sandford ought not to have risked so considerable an injury to the interests of British Pharmaceutical Chemists for the mere opportunity of raising what seems to us little more than a technical discussion. According to their speeches, we imagine there would be but little of the original bill left if it had to be amended to suit their views. Mr. Frazer, however, thinks the bill a good one, and that the Irish claimants are entitled to get it. Mr. Frazer is consistent in that opinion, for he desires a mild flooding of assistants throughout the three kingdoms at almost any cost; but after that speech he was far from consistent in seconding Mr. Schacht's motion, the object of which was to oppose those clauses of the bill which would allow Irish pharmaceutical chemists to practise in the rest of the kingdom, but those clauses only.

As for the Irish chemists themselves, if they so decidedly prefer Home Rule, and if Mr. Disraeli's Government is so desirous to give it to them, we can have no manner of objection. We imagine, however, they are being led in this matter by a few Dublin physicians, and it is more than likely that when the A.B., C.D., E.F., &c., of Clause 3 of the bill come to be

interpreted into living names, a fair proportion will represent the medical profession. If that be so the path before our *confrères* is not all beside still waters. The medical profession is not wanted anywhere to help manage the affairs of pharmacy, and when they intrude unpleasantness is almost certain to ensue.



SHIPMENT OF ARSENIC.

A LARGE ship, the *Niagara*, recently made a voyage from Liverpool to New York. In her hold she carried 1,950 bags of table salt, and above that, "between decks," was a cargo of chemical and general merchandise. Among the chemicals were 100 kegs of arsenic. The voyage was a very rough one, and these arsenic kegs were considerably battered about in the course of it. The arsenic got loose, and the sea, entering, carried a fair quantity of it into contact with the salt. On arrival at New York the latter was sold, and would have been widely distributed throughout the country, if it had not happened that the captain of the vessel managed to put two and two together just in time. Quantities of the salt had been sent to various parts of the Union, and the sale had to be prevented by telegraph. This shows how narrow an escape some hundreds, perhaps thousands, of Americans had from certain death. It may perhaps serve also as a caution to shippers of such deadly neighbours to articles of food as kegs of arsenic.

TOUGHENED GLASS.

THE toughened glass which we described in our last has figured at a Society of Arts' meeting since then, a description of it having been given there by Mr. P. F. Nursey, C.E. One or two "practical" gentlemen who were present slightly pool-poohed the invention, but the extraordinary results which were shown experimentally were quite sufficient to satisfy the audience of the value of M. de la Bastie's discovery. It was stated that the toughened glass is likely to be used for the first time at the Westminster Aquarium now in course of erection. Its application to the manufacture of printing types and printing rollers is one of the newest things thought of. Another Frenchman, M. de Luynes, is experimenting with the toughened glass, in the hope of finding a means of cutting it, and though he has not yet succeeded we are told he is very sanguine of attaining that end ultimately. According to the *Cologne Gazette* some Silesian firm has also invented recently a new glass, with properties similar to those possessed by M. de la Bastie's glass. They call it "metal-glass," but until fuller particulars are given we shall prefer to believe that they have only succeeded in imitating the French invention.

The same journal has also directed attention to an old Roman story told by Pliny, Petronius, and Dion Cassius to the effect that in the time of the Emperor Tiberius somebody produced a flexible and malleable glass, and brought a magnificent vase made of it to that monarch, anticipating a rich reward. The intelligent and thoughtful gentleman on the throne considered that if this sort of thing was encouraged the days of gold and silver were numbered, so in his rage and fury he dashed the vase to the ground. He only succeeded in spoiling the shape a little, however, and the smiling inventor soon put matters right

in that respect with a little hammer. But a Roman emperor was not to be thwarted in that manner, and he ordered the genius to be killed on the spot, so that his secret should go no further. So if that story is true Tiberius is responsible for most of the broken crockery which has worried the world during the last 1,800 years; and we trust his ghost has suffered so much in consequence that it will be one of the most eager anticipants of the full success of M. de la Bastie's invention.

TINCTURE OF ARNICA.

DR. JAMES WHITE, in the *Boston Medical and Surgical Reporter*, mentions three cases in which he has found the use of tincture of arnica as a lotion for bruises produce serious attacks of acute ekzema, and he believes that similar poisonous results are more frequent than has been supposed. Whatever benefit may be derived from the employment of tincture of arnica Dr. White thinks due to the alcohol it contains, and it seems almost time that a more harmless root with an equally well-sounding name should take the place of this dangerous preparation in fashionable medicine-chests. Hebra a long time ago protested against the use of this pretended remedy, and Tilbury Fox has called attention to its irritating qualities. It remains to be said, however, that a medicine which can do harm can always also do good; but an unbiased series of experiments on the action of arnica would be a useful work for an active and intelligent young surgeon to undertake, and he need not enter on the slippery paths of vivisection to make them.

THE ALKALOID OF JABORANDI.

AFTER experimenting very laboriously and skilfully with both bark and leaves of jaborandi, Mr. A. W. Gerrard, of University College Hospital, has completely succeeded not only in separating the alkaloid of that plant, wherein its great power seems to lie, but has also recently produced crystals of the nitrate and hydrochlorate salts of this alkaloid, which he terms pilocarpine. The following is a brief digest of Mr. Gerrard's process for preparing the alkaloid:—

"Prepare a soft extract either of leaf or bark with 50 per cent. alcohol. Digest this with water, filter and wash. Evaporate the filtrate to a soft extract, cautiously add ammonia in slight excess, shake well with chloroform, separate the chloroform solution and allow it to evaporate; the residue is the alkaloid pilocarpine with probably a small amount of impurity.

"Besides the alkaloid, jaborandi contains an acid resin, tannic acid, volatile oil, and chlorophyll. The acid resin is soluble in ether, and possesses properties which indicate it to be the substance by which the effects of its external application are produced."

Forty-five grains of pilocarpine, produced as above described, were prepared. To this distilled water was added and sulphuric acid drop by drop until the alkaloid was nearly dissolved, and the solution was neutral. After setting aside for ten days for slow evaporation, and no definite crystals resulting, Mr. Gerrard made other experiments, employing nitric and hydrochloric acids. With these he has completely succeeded, and has produced nitrate and hydrochlorate of pilocarpine in a crystalline condition, which it is likely will be the future form in which this remarkable medicine will be administered. Mr. Jameson, Dr. Sydney Ringer's assistant, reports that half a grain of the nitrate produced the usual therapeutic effects of a full dose of jaborandi on a patient within an hour; while one drop of solution of the nitrate (gr. 1 to 3j) put into the eye of a patient caused the pupil to contract to about the size of an ordinary pin's head.

Scientific Notes.

ARTIFICIAL IVORY.*

Two pounds of pure indiarubber are dissolved in thirty-two pounds of chloroform, and the solution saturated with purified ammoniacal gas. The chloroform is then distilled off at a temperature of 185° F. The residue is mixed with pulverised phosphate of calcium or carbonate of zinc, pressed into moulds and cooled. When the phosphate of calcium is used, the resulting compound partakes in a great degree of the nature and composition of genuine ivory, for we have the requisite proportion of the phosphate and the indiarubber, which takes the place of the cartilage; the other component parts of the genuine article are of little importance.

THE GERMAN PHARMACOPOEIA TEST FOR MARANTA STARCH.†

Two samples of so-called Maranta starch, obtained direct from a well-known English house, having been sent by a druggist to K. Calmborg for examination, that gentleman employed the test given in the *Pharmacoepoeia Germanica*. This test consists in agitating the starch for ten minutes with ten parts of a mixture of hydrochloric acid with half its bulk of water. The true Maranta starch should not form a jelly. It being found that one of the above mentioned samples gelatinised more rapidly than the other, the test was repeated with Maranta starch obtained from five different sources, with results that threw great doubt on the value of the test. All except one of the samples gelatinised, yet were found, on examining them microscopically, to be pure Maranta starch. From this Calmborg concludes that a single abnormal sample of the starch was employed in fixing the Pharmacopoeia test, and recommends the microscope as a sufficient and only certain guide.

FOOT-SWEAT.

HAGER ‡ recommends the use of the following powder for excessive sweating of the feet. Burnt alum, five parts; salicylic acid, two and a half parts; wheat starch, fifteen parts; Venetian talc, fifty parts; mix and make a very fine powder.

IODIDE OF ALBUMEN.§

ON account of the irritating effects of iodine on the organism, it is rarely used in the free state. With a view of modifying this objectionable feature, it is usually combined with some such substance as starch or syrup of orange peel. Collas has lately recommended its combination with albumen. In this combination the iodine is completely masked, and its presence can only be demonstrated by destruction of the compound; further, it is present in a constant and known proportion. The iod-albumen is obtained by strongly agitating a solution of albumen with iodine in solution or fine powder. The originally dark brown mixture becomes pale after standing one hour, and no longer gives a violet colour with starch paste. The product is dried by gentle heat in a drying closet, and for medicinal use is brought into the pilular form. The manipulation is such that each pill contains 5 mgr. of iodine. According to medical testimony, iodine used in this form has not been known to fail, and may be taken for a week without causing disturbance of the digestive or other functions. The dose is 5 to 6 pills daily.

APPARATUS FOR THE CONTINUED PREPARATION OF CHLORINE IN THE COLD.||

M. MERMET's apparatus consists of two flasks tubulated at the base. These are fixed on a board, and the tubulures connected by stout caoutchouc tubing. Flask No. 2 is closed by an indiarubber stopper, which is traversed by a glass tube, having

* *American Druggist's Circular*.

† *Archiv. de Pharm.*, April, 1875, p. 352.

‡ *Pharm. Zeitung*, April, 1875, p. 229.

§ *Pharm. Zeitung*, April, 1875, p. 336.

|| *Journ. de Pharm. et de Chimie*, March 1875, p. 217.

a stop-cock ground into it outside the flask. The re-agents employed are diluted hydrochloric acid and chlorinated lime. The latter article, as met with in commerce, is not suited for the purpose, on account of its tendency to cake after the acid has been acting upon it for a short time. It is, therefore, made into small balls, about the size of a filbert, by mixing with water so as to form a very thick paste, which is then moulded with the hands. After exposing in the air for some hours, the balls absorb a little carbonic acid gas superficially, and aggregate to such an extent as to permit of manipulation without losing their shape. These are placed in Flask No. 2. Flask No. 1 is charged with three parts hydrochloric acid and one part water. On turning the stop-cock, the acid passes from the first to the second flask along the connecting tube of india-rubber, and acts on the balls of chlorinated lime with as much regularity as if they were marble. The chlorine evolved may be directed at will as it issues from the exit tube of the second flask, and if the small proportion of carbonic acid gas which at first accompanies it is considered detrimental to the experiment in hand, this may be removed by causing the gas to pass over fragments of chloride of calcium. An arrangement like this, yielding chlorine by simply turning a cock, ought to be of service in many ways.

GRAINS DE SANTÉ.

The American Druggists' Circular gives the following formula for *Grains de Santé*, from Cadet:—

Aloes	100 grains
Jalap	100 "
Rhubarb	25 "
Syrup of Wormwood, sufficient.	

Divide into two-grain granules, which are to be silvered.

Dose.—One to ten, before meals.

COKE IN THE DISTILLATION OF SULPHURIC ACID.

M. F. M. RAOUT* finds that the phenomenon of "bumping," with which all are familiar who ever attempted the distillation of sulphuric acid, may be entirely obviated by the introduction into the retort of a few fragments of coke. The vapours are condensed in the ordinary way, and the distillation proceeds very rapidly. The coke, which should be as dense as possible, does not seem to be attacked to an appreciable extent, and the same pieces may be used for many operations. After long use, however, it becomes soft, and marks like plumbago. The author suggests that in this state the coke may be susceptible of useful application. A litre of sulphuric acid distilled over coke contained 20 c. c. of sulphurous acid gas.

SEPARATION OF ARSENIC AND ANTIMONY.

At a recent meeting of the Society of Pharmacy of Paris, a note was read from M. Schlagdenhauffen on the estimation of a mixture of arsenious acid and antimonious oxide. By dissolving an ascertained weight of such a mixture in water containing Seignette's salt (sodium potassium tartrate) and an alkaline carbonate, and then adding to the solution a small quantity of indigo, a liquid is obtained in which it is possible to determine the relative proportions of arsenic and antimony by means of a titrated solution of sodium hypochlorite. The first effect of the reagent is to change the arsenious into arsenic acid, and the antimonious oxide into antimonious acid. It is only at the close of this double metamorphosis that the chlorine of the hypochlorite commences to act on the indigo; so that in the decolorisation of the liquid is furnished a precise indication of the finished reaction. Theory would indicate that for the same weight of mixture, the exhaustion of hypochlorite would vary according to the relative proportion of the two ingredients: experiment confirms this indication. The amount of hypochlorite employed gives, by a simple calculation, the quantitative result to which it corresponds.

M. Méhu observed in connection with the above, that, having once had to examine a pretended definite compound of arsenite of antimony, he had been able to separate the arsenious acid by the simple action of strong alcohol.

The Pharmaceutical Week.

THE ANNUAL MEETING, MAY 19, 1875.

A DULLER anniversary of the Pharmaceutical Society's Annual Meeting could hardly be imagined. We say that with all respect for the few gentlemen who did endeavour to extract some usefulness from the occasion, and certainly with no disrespect to the talented managers of the concern, who have thus piloted us into such halcyon waters. Excellency is dull; this report must needs be dull.

The council were nearly all present, awaiting calmly the "hard questions" which, for anything they knew, might be put. Behind them hung an admirable portrait of the well-beloved Henry Deane—the portrait which was painted by a subscription suggested and collected by Mr. Sandford. The artist has perfectly caught that expression of tranquillity which so peculiarly characterised both his face and his character, and which almost seemed to hint that there was no need to disturb him for another rest. At the close of the meeting, Mr. Sandford said a few words about this portrait, and, in the name of the subscribers, presented it to the President for the Society, to be hung in the council-room by the side of his old friend, Thomas N. R. Morson.

There being next to nothing to talk about, Mr. Hills, the President, said it all in a very few words. He read the following short address:—

Another anniversary having come round, I again avail myself of the privilege of welcoming you in this hall, and of congratulating you upon the apparent healthy condition of the Society. Although I speak thus encouragingly, I still feel that our work is not done, in fact it never will be done; for, so long as the Society exists, so long will it require the watchful care and attention of all who belong to it, and the more interest taken by the members, the more successful and important will the Society become.

Mr. Brady, in his address to the Pharmaceutical Conference at Brighton, 1872, reminded us that Lord Bacon says:—"I hold every man to be a debtor to his profession; from the which, as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves by way of amends to be a help and ornament thereunto." I entirely agree with Lord Bacon, and feel that everyone practising pharmacy should do all in his power to place the Pharmaceutical Society in an enviable position with the scientific and learned societies, by which means it elevates himself and takes his position accordingly. Lately we have lost a bright ornament of the Society in the death of Mr. Daniel Hanbury, one who was a remarkable example of Lord Bacon's saying. I will not say more, but refer you to his works, and to the tribute to his memory in the pages of our Journal, as well as in those of THE CHEMIST AND DRUGGIST and other journals, and will only add, what I have frequently said before, when speaking to young men who have asked me to advise them as to their aims in life—take Mr. Daniel Hanbury for your example, and follow his course if you can. While speaking of the loss of Mr. Hanbury to the Society, I must mention the loss of another excellent man, Mr. George Edwards, who always took a prominent position in the Society, and was ever active in promoting its best interests. Having spoken of elevating the position of the members of the Society, I will mention a most important movement now going on and making satisfactory progress, which will not only raise the position of pharmacists, but will also assist us in carrying out our educational programme, and materially ameliorate the condition of our members—I mean the earlier closing movement, which I look upon as one of the greatest boons we have experienced in our time. I feel its advantages myself, and strongly recommend its adoption by every pharmacist, and I take advantage of this opportunity of thanking Mr. Giles for his most excellent letter on this subject, published in the journal of March 20. I am, and always have been, an advocate for doing everything that is required of us as dispensers of medicines, and I cannot help feeling that if the desire became more general to follow out what has already been done by many, viz.,—close places of business at an earlier hour, the public would soon become educated to such a desirable change, and thus the pharmacist be enabled to give up all unnecessary business at or about 7 or 8 o'clock—"a consummation devoutly to be wished."

We print that address in order to add a few words with the object of keeping aloft the early closing flag. Matters are improving remarkably in this respect among the better class of pharmacies, and indeed, as units of the general public, we beg to assure chemists that the general public is getting gradually to regard this as an indication of a better class pharmacy. In Oxford Street and Bond Street and there around, many of the first-rate shops are closed at 7. Of course, certain assistants remain in readiness for any business, but this plan makes the desire of the proprietors unmistakable. Mr. Hills is entitled to a very large share, the chief share, of the credit attaching to this amelioration. "Very easy for him and them with all their assistants, and with their piles of wealth," is the frequent and not unmotivated response; "but, how can I follow their example, with more mouths to feed than fingers to earn the food, and every shilling discounted before it comes." Tradesmen in such a position we judge are by no means required to follow the example. It is very hard for them that they have to work early and late to get a bare living, and their richer brethren might well spare them the small earnings which are to be picked up after the curfew. It is for the latter, both in town and country, boldly to start the system and maintain it without waiting until all the neighbouring chemists can be got into one frame of mind, or until customers shall cease to come late of their own accord.

After the President's address the report was taken as read, and its adoption moved by Mr. Urwick and seconded by Mr. Martindale. For a few moments there seemed a prospect of no criticism at all forthcoming, when Mr. Slipper came to the rescue, and offered a few comments on things in general. First he urged that the council should enforce the Sale of Poisons Bill more energetically for the benefit of the trade, and he alluded to various instances where it was systematically disregarded. He also called attention to the questions on the metrical system given to candidates in the Preliminary Examination. One of them ran—"What is the weight in *grammes* of a cubic decimetre of water? Express the equivalent in *grains* of a decagramme, a centigramme, and a milligramme." A boy coming fresh from school, private or public—and it was such they wanted to come up for the Preliminary—would hardly be likely to answer that question.

In reply to the first part of Mr. Slipper's speech, Mr. Sutton remarked that there was reason for hoping that a little more vigorous action might be looked for, and he thought they ought to use the power they had. The great difficulty experienced, he said, was that certain wholesale dealers quietly sold to shopkeepers. He omitted to explain what was the precise difficulty occasioned by this procedure.

Mr. Randall then asked how could the metrical system be said to be uniformly introduced into the Preliminary Examination so long as the Oxford and Cambridge certificates were taken, in which examinations it was not a subject. Some little talk ensued on this point, but it was ultimately left for the consideration of the council.

A vote of thanks to the out-going council, moved by Mr. Stacey, and seconded by Mr. Randall, concluded that day's business.

ELECTION OF COUNCIL.

The Election of Council resulted thus:—

<i>Elected.</i>			
Bottle	1,004	Robbins	882
Mackay	1,002	Baynes	863
Greenish	982	Brown	850
Savage	958	Frazer	839
Hanbury	923	Cracknell	823
Alberton	922		
Betty	915	<i>Not Elected.</i>	
Rimington	895	Andrews	541
Hampson	882	Clark	539
		Richardson	468

Messrs. Hanbury and Cracknell are the new members replacing Messrs. Radley and Stoddart, who declined re-election.

The present council consists of the following gentlemen:—

ATHERTON, JOHN HENRY, Long Row, Nottingham.
BAYNES, JAMES, 24 Waterworks Street, Hull.
BETTY, SAMUEL CHAPMAN, 6 Park Street, Camden Town, N.W.
BOTTLE, ALEXANDER, 7 St. Martin's Terrace, Dover (Vice-President).
BROWN, WILLIAM SCOTT, 113 Market Street, Manchester.

CRACKNELL, CHARLES, 217 Edgware Road, W.
FRAZER, DANIEL, 113 Buchanan Street, Glasgow.
GREENISH, THOMAS, 20 New Street, Dorset Square, N.W.
HAMPSON, ROBERT, 205 St. John Street Road, E.C.
HANBURY, CORNELIUS, Pough Court, Lombard Street, E.C.
HILLS, THOMAS HYDE, 338 Oxford Street, W. (President.)
MACKAY, JOHN, 119 George Street, Edinburgh.
OWEN, JOHN, 372 Oxford Street, W.
RIMINGTON, FELIX MARSH, 6 Ivegate, Bradford, Yorks.
ROBBINS, JOHN, 372 Oxford Street, W.
SANDFORD, GEORGE WEBB, 47 Piccadilly, W.
SCHACHT, GEORGE FREDERICK, 7 Regent's Place, Clifton, Bristol.
SAYAGE, WILLIAM DAWSON, 4 Park Road East, Brighton.
SHAW, JOHN, 24 Great George Street, Liverpool.
SUTTON, FRANCIS, Bank Plain, Norwich.
WILLIAMS, JOHN, 16 Cross St., Hatton Garden, E.C. (Treasurer.)

THE CONVERSAZIONE.

As usual the Pharmaceutical Society gave their annual conversazione at the South Kensington Museum, on the evening of May 19. Each member of the Society was invited, and a lady with each, and invitations were also freely distributed to other scientific bodies. About 2,500 ladies and gentlemen accepted the invitation, and naturally the spacious building presented a gay appearance. This number was smaller than has been present on former occasions, and we are inclined to think that unless some novelty, either in the locality or the programme, can be devised, it might be advisable to suspend these soirees for a year or two, at least until there should prove to be a genuine desire for them among the members.

THE PHARMACEUTICAL DINNERS.

It is among the signs of prosperous times to note that pharmacists are becoming fastidious in their appetites, and are as particular about the quality of their champagne as Merchant Taylors or aldermen. The dinner at the Crystal Palace last year offended a good many, so it was resolved to have a change in the *locale* on this occasion, and Willis's rooms were wisely selected. The dinner took place on May 18, under the presidency of Mr. Hills. Some 250 gentlemen were present, including a rather larger number than usual of outsiders, physicians, and other visitors, and a large representation of the wholesale houses. The dinner was excellent and well served. Coots and Tinney's band played during the dinner—a pleasure, perhaps, to some persons, an execrable annoyance to others, especially to those who happened to be placed close by the spring of harmony. Music, on such an occasion, is very soul elevating no doubt: that is its metaphysical result; physically, it crushes all conversation, and materially assists in the formation of the headache which not unfrequently succeeds these public festivities.

The guests present included such celebrities as the President of the Medical Council (Dr. Acland), the President of the Medical Society (Dr. Routh), the President of the Chemical Society (Professor Abel), the President of the Linnean Society (Dr. Allman), Dr. Garrod, Dr. De Vrij, Professor Barff, Dr. B. W. Richardson, F.R.S., Charles Landseer, R.A., &c. Professor Tyndall and Mr. Millais had also accepted invitations, but were prevented at the last moment from fulfilling the engagement. This considerably detracted from the weight of the toast "Science and Art," which had probably been placed on the programme in order to bring these gentlemen out. We were also spared the pleasure of toasting Mr. Disraeli's Government by the absence of Mr. W. H. Smith, M.P., who had also promised to come but could not.

The Queen and Royal Family having been disposed of in two short speeches from Mr. Hills, Mr. Sandford rose to propose "The Medical Profession." He was sure such a toast must be received with enthusiasm by any assembly of educated Englishmen, and above all by such a company as that before him. The manifestations of this enthusiasm were not particularly marked perhaps, but were no doubt felt the more. Dr. Acland, the President of the Medical Council, responded very happily. Of course he alluded to the mutual relationship of medicine and pharmacy and so on, but referring to the "trade or profession" question, he said "his experience had taught him, that whereas the spirit of trade might exist in

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a profession, the highest scientific and liberal principles might exist in those who were generally supposed to be pursuing a trade, and he had of his own personal knowledge found, amongst British manufacturers and tradesmen, worthy representatives of science, who at the same time, on the commercial side of their occupation, were meet descendants of those merchant princes who had helped to raise the English character to that high standard which it now bore, men worthy to be distinguished in any profession whatever. As long as they carried the highest principles of commerce into daily life, they had no reason to fear but that they would maintain in all their doings the dignity and honour of their country."

Dr. B. W. Richardson proposed "The Pharmaceutical Society" in a very elaborate oration, and to that, of course, Mr. Hills, the President, responded. Mr. Betty next proposed "Science and Art." He pictured pharmacy as a life science, trotting, in tiny steps, by the side of the other sciences; only this was pictured in classical Latin:—

Dextræ se parvus Iulus
Implicit, sequiturque patrem non passibus æquis.

Having slightly taunted us because we had not lived in the age of Pericles, or been co-citizens of Phidias, we were introduced to the representatives of Science and Art present that evening—Dr. Allman, President of the Linnean Society, responding for the former, and Mr. Charles Landseer, R.A., for the latter. The President of the Chemical Society (Professor Abel) then gave "The British Pharmaceutical Conference," and took the opportunity of urging the value, as a mental training, of scientific research, even if only carried out at short intervals. Professor Atfield replied, saying that the Conference would especially value the approval of such an eminent master of research as Professor Abel. He (Professor Abel) had some years ago seized the thread of a particular line of study; that thread was gun-cotton. Professor Abel had never let go of it, and consequently both he and his work had made considerable noise in the world. Finally Mr. Bottle proposed "The Visitors," to which Dr. Routh, the President of the Medical Society, responded.

Some singing at intervals filled up the evening, which was generally enjoyed by those present.

Medical Cleanings.

The editor of the *Danbury News*, in an article on "Medical Progress," reports that an English physician recently removed a section of a patient's liver, placed it on a plate, scraped it carefully, and returned it to its place, fully restored to its normal action. This, he thinks, promises to work a revolution in the treatment of disease, and in a few years we shall have an addition to domestic literature something like this: "Husband, I wish you would take John's right lung down to the doctor this morning, and have the middle lobe fixed," or, "Will you step into the doctor's when you come home this noon, and see if he has Mary's liver mended, as she wants to go out to tea this evening?" The practice will become so common in time, we are sure, that none of the neighbours will be startled to see a wife, with a veil tied around her head, leaning out of a bedroom window, and shouting to her receding husband: "Jer-e-miah! tell Dr. Scrapen to send up Willie's right kidney at once, whether it is done or not. He's had it there mor'n a week, and the child might as well be without any kidney, and done with it!"

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At Bois d'Haine, in Belgium, lives a girl about 25 years of age, named Louise Lateau. Her case is so singular that it has attracted the attention of medical authorities throughout Europe. The scoffing Virchow has given an address respecting her, and the Belgian Academy of Medicine appointed last autumn a commission to investigate her case. Louise, it is stated, has been from her childhood a most intense Christian devotee, and was fond of spending time in solitude meditating on the passion of the Saviour. Soon after a serious illness some seven years ago she commenced to experience on every Friday severe pains in the forehead, in the left side, and on the dorsal surface of the hands and feet, followed soon by an oozing

of blood. These are the *stigmata*, or marks corresponding to those inflicted on Christ during His crucifixion. The oozing disappears after Friday and does not recur until the next Friday, that being the day, according to tradition, on which the crucifixion took place. Since March 30, 1871, Louise asserts she has not tasted any food or drink, and has not had any action of the bowels, nor has she passed any urine. The Belgian Commission which examined her last September found her in fairly good condition. They were not allowed to have her watched by night; and this they thought evidence enough that as regards the abstinence from eating and drinking a fraud was being practised. It would not be a very unrighteous assumption, we imagine, that people who would devote themselves to the perpetration of one trick would somewhat easily lend themselves to a second. The Belgian Commissioners, however, did not allow themselves to be guided by this ordinary canon of scepticism, and they concluded that while the fasting was false the *stigmata* were genuine. To prove this they fixed Louise's right hand in a glass cylinder, which they secured, or think they secured, so surely that there was no possibility of the hand being reached. During the night on which the experiment was tried a certain quantity of blood flowed from the hand and was collected in the cylinder. There remains, therefore, they say, no doubt that the *stigmata* are the result of mental action only. And then, with what we can only regard as a piece of the grossest injustice, these medical experts—who, be it remembered, had been told off to investigate a professed miracle, and had been forced to believe the evidence—must coolly turn round and tell us "instances of ecstacy with local cutaneous hemorrhages are not rare. These are pathological accidents accompanying a low condition of the blood and a disorder of the nervous system. The blood loses its plasticity, and a sweating of blood (hematidrosis), or an oozing from the capillaries into the adjacent tissue (ecchymosis sanguilatio), or into little 'blood blisters' (hemophilia), is the result. Naturally enough, the determined expectation of such an occurrence on a particular part of the body directs the phenomenon to that part or spot, and hence the *stigmata* arise where the mystic, dreaming over the passion on the cross, expects them to. This explanation, easily supported by numerous cases quite outside religious monomania, explains the condition of Louise Lateau without convicting her of imposture in this point."

* *

The *Clinic*, an American medical journal, gives the following brief account of a noted English physician:—"That Sir Wm. Gull does not owe his success in life to adventitious aids is evident enough. He was the son of a poor farmer—a labourer who tilled a small plot of ground, the property of Guy's Hospital. He attracted the attention of the Treasurer of the Hospital as a bright lad, and was given a place as bottle-washer in the drug-room of the hospital. He was given the opportunity also to have some instruction, entered as student, graduated with honour, became house-physician, assistant physician to the hospital, physician, and lastly consulting physician, his present place. These facts are well known, yet he is created Baronet, and welcomed into their ranks by the most exclusive aristocracy on the globe. He is no common man, whatever may be said of him, who can carve out such a career for himself, and from a charity lad become the foremost physician of the greatest city of our modern civilisation. Gull is said to be so closely occupied that patients have to make engagements days in advance of the time."

* *

The following is the scheme adopted to regulate the distribution of the Hospital Sunday collections in London in future:—

"1. That such congregations as have forwarded contributions to the fund during either of the two preceding years be entitled to a voice in the management of the fund, and that the minister and two laymen representing every such contributing congregation be summoned to meet the council in the month of December in each year, to receive the annual report of the council for the year, and to elect the council for the succeeding year. 2. That the council consist of not more than fifty clerical and fifty lay members, with whom shall rest the power to arrange for the collection, to appoint the committee of distribution, to receive its report, and to frame such rules as may be needful for the proper

administration of the fund. 3. That the committee of distribution, consisting of nine members, with the Lord Mayor as president *ex officio*, be elected at an early meeting of the council after its appointment. 4. That awards to hospitals, &c., be primarily based on the total expenditure of each institution, after deducting therefrom (1) the income derived from endowments and realised property, (2) the amount received in legacies exceeding 100*l.* each, (3) the amount of expenses of management; but that in every case the merits and pecuniary needs of the institution concerned be fully inquired into and considered by the distribution committee, and that the award made be determined in accordance with the judgment of the distribution committee upon such merits and needs, provided that in no case shall the grant be so reduced or withheld until a conference shall have been sought with the managing committee of the said hospital, etc. 5. That payments made by or on behalf of patients be left to the discretion of the distribution-committee, to be dealt with in each case as they may see fit. 6. That no institution to the benefits of which admission can only be gained by election from the general body of subscribers be eligible for grants from the fund. 7. That hospitals, etc., receiving grants from the fund be required to place at the disposal of the council the same number of letters of recommendation for patients to which an annual contributor would be entitled for an annual subscription equal to the amount of the grant. 8. That in the event of a congregational collection made on Hospital Sunday being given to a particular hospital, dispensary, or institution, instead of being sent to the general fund, the amount so sent shall be deducted from the grant made to that hospital, etc. 9. That, in making their awards, it be an instruction to the committee of distribution to take into their favourable consideration the amount of congregational collections received by the several hospitals, etc., during the three years preceding the institution of the Hospital Sunday fund; and 10. That the committee of distribution shall present their report to the council before the fund is finally distributed."

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The *Shanghai Gazette*, alluding to the death of the late Emperor of China, conveys the information that shortly before the Emperor's death a gigantic image, the Goddess of Small-pox, was paraded round the City of Peking in solemn procession, and then taken into the very bedroom of the dying youth, where it was worshipped and honoured with many propitiatory offerings. As, however, the goddess continued obdurate, she was subjected to a severe thrashing and other insults, and finally burned. The fatal result of the attack was, we suppose, her revenge for the maltreatment.

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In the *Pacific Medical Journal*, Dr. H. C. Morey, of Gilroy, Calcutta, tells a story which makes a considerable demand on our credulity. It might be entitled "glorious news for drunkards."

The subject of Dr. Morey's story is a man about fifty-two years of age, about five feet eight inches in height, and weighs about one hundred and fifty-eight pounds; dark complexion, very plain in appearance, very eccentric and peculiar in his habits, and always keeps his own counsel; has a good intellect, but a limited education.

I first became acquainted with this man, he says, in the fall of 1861, and soon learned of his habit of eating strychnia, after a long and continued debauch, and in a condition bordering on delirium tremens. The first time my attention was particularly called to it, he wished me to give him a bottle of strychnia, which I did at night, about bedtime. He took the bottle, pouring the strychnia into his hand, and threw it into his mouth as carelessly as though it were salt; and, in the course of half an hour, not feeling the effects from it that he wished, he repeated it, and continued to do so until he became perfectly sober. The quantity required would correspond to the length of time he had been drinking, and the quantity of whisky he had drank. I was struck with the wonderful effect it had to so completely sober him, and leave his system so entirely free of any nervous disturbance, and without the reddened and bloated appearance of the face, the dull, heavy eyes, and irritable stomach of the drunkard. After a two weeks' drunk, with all the appearances of approaching delirium tremens, he got up in the morning with

his mind clear, his eyes bright, his skin clear and fair, and with all the appearances of a man in perfect health and vigour, and ate as hearty a breakfast as usual, and went to his work as though he had never taken a drop of whisky in his life. My curiosity being excited at what seemed so unaccountable an occurrence, I began questioning him as to when he commenced its use, and what induced him to take it, but found him very reticent, and have not to this day ascertained the causes that first led him to its use. All he will tell is that he commenced its use in 1856. From 1861 to 1867 I saw him very frequently, and almost as often have seen him take the strychnia, until it ceased to be a curiosity, except to study its physiological action. In every instance when he took it every appearance of dissipation would disappear in a very short time. Whether strychnia is an antidote to alcoholic poison, and *vice versa*, was a study for which I could find no authority to guide my conclusions.

From 1867, I did not see him until the month of November, 1874, when he came to this place and called on me for strychnia, as of old. I told my clerk to give him all he wanted. He gave him a bottle, from which he took about twenty grains. In an hour he was all right, and sober as ever.



PEPSIN-ESSENZ.

A GERMAN preparation of pepsine in liquid form is now introduced into Great Britain by the sole agents for this country, Messrs. Corbyn, Stacey & Co., of 300 High Holborn. Its formula has been devised by a no less eminent authority than Dr. Oscar Liebreich, of Berlin, to whom medicine is indebted for the discovery of the application of chloral hydrate. We do not know by what process this Pepsin-Essenz is produced, but we presume it is prepared direct from the stomach, and if made by a scientific formula such a method ought to yield as reliable a product as the powder. This preparation appears a very good one. It readily coagulates milk and dissolves albumen, but as we do not know its price we cannot say whether it is an economical form of administering the medicine or not. It is a liquid of a handsome golden colour and pleasant to the palate. The proportion of alcohol contained in it is but small, and therefore in this respect the action of the pepsine is but little interfered with. The general style in which it is put up will render it an attractive and unique counter article.

RICHARDSON'S EMULSION OF COD LIVER OIL.

We have received from Messrs. John Richardson & Co., of Leicester, samples of excellent emulsions of the consistence of jelly, containing fifty per cent. of cod liver oil.

These emulsions are either plain cod liver oil, or the same in combination with phosphorus, or, thirdly, with guinine. They are handsomely put up in half-pound wide-mouth glass bottles, and are marked to retail at 1*s.* the simple, and 1*s. 6d.* the compound preparation.

The emulsionising ingredients are well chosen, with a view to mask as far as possible the odour and flavour of the oil, and the resulting products are excellent specimens of pharmaceutical work, and also, we are satisfied, valuable medicinal preparations. To persons to whom the oil in its native form is objectionable these emulsions might well be recommended.

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HULL.

CHEMISTS' ASSOCIATION.

The winter course of lectures delivered by Mr. H. J. Parson concluded March 25, the number of students being slightly in excess of last year. The lectures comprised chemistry, materia medica, and pharmacy, and these were followed by examinations in each subject. The prizes for the first two were offered by the association, and Mr. G. Myers, vice-president, gave one for pharmacy. The results were as follow:—Chemistry, Mr. E. A. Allison; materia medica, Mr. W. G. Blythe and Mr. E. A. Allison; pharmacy, Mr. W. G. Blythe.

PRESENTATION TO MR. BAYNES.

On the 4th inst. several of the leading members of the Hull Chemists' Association assembled at the Cross Keys Hotel for the purpose of presenting to Mr. James Baynes a testimonial of their esteem and recognition of the valuable service he has rendered to the trade in his capacity as one of the Council of the Pharmaceutical Society. An excellent dinner was provided by Mrs. Varley, and between twenty and thirty gentlemen sat down. Mr. Anthony Smith (president of the association) filling the chair, and Mr. William Stanning the vice-chair. After the usual prefatory toasts,

The Vice-Chairman proposed "The Pharmaceutical Society," congratulating the Hull Chemists' Association in having one of its members on the Council, and another as its local hon. secretary.

Mr. C. B. Bell responded, and in the course of his remarks expressed the hope that the Pharmaceutical Society might long continue as their legal head. He trusted that none of the innovations that might be brought in with the idea of clipping the wings of that society would be successful; but that it might continue in the honest straightforward course it had ever pursued, and thus be a lasting benefit to the trade generally. He was now busily engaged in opposing the Pharmacy Bill, which had been introduced into the House of Commons by Sir Michael Hicks-Beach, which if carried would have a detrimental effect upon the Pharmaceutical Society. As the bill was now framed any young man might, after passing certain examinations in Ireland, return to this country and commence business as a chemist and druggist without paying anything, or only a small acknowledgment, to the society. Petitions had been sent up against this bill, and he read replies which had been received from the East Riding any borough members on the subject. They had on the Council of that society their respected friend Mr. Baynes, and they must all admit the local society, mainly through his instrumentality, had received great benefit at the hands of the society. He concluded by thanking them for the compliment they had paid him by electing him for the fourth year the local hon. sec. of the society.

The President, in proposing the "toast of the evening," alluded to the invaluable services which Mr. Baynes had rendered, not only to the Hull Chemists' Association but to the trade generally. As one of the founders of that association he had often felt that without such a man at the helm they must long ago have been lost at sea. He need not recapitulate the adventures they had had with the enemy, but if he might be allowed to use a mythological metaphor, he would say the business had become an Aegæan stable, and but for some Hercules rising to cleanse it they would have been lost indeed. In Mr. Baynes they found that Hercules; and he was not saying more than was really due to that gentleman when he made such an assertion. In the name of the association and the trade, therefore, he asked Mr. Baynes' acceptance of this humble tribute of their gratitude and esteem. It might have assumed the shape of a more valuable gift, but after consideration they felt that rather than adopt the stereotyped form of presenting a piece of plate, as conveying their individual esteem and good wishes, it would be preferable to offer Mr. Baynes a presentation from that society which he had so nobly aided. If he would accept that gift the subscribers would feel that theirs was the obligation and not his.

The testimonial consisted of a handsomely illuminated address in a gilt frame, the margin being adorned by Mr. Baynes'

monogram and some ancient trade-marks, beautifully executed in gold and colours. The text was as follows:—"Hull Chemists' Association. At a meeting of the above association, held at the Cross Keys Hotel, on March 9, 1875, the president, Mr. Anthony Smith, in the chair, the following resolution was proposed by Mr. Stanning, and seconded by the vice-president (Mr. Myers), and carried unanimously:—"That the best thanks of this association are hereby presented to James Baynes, Esq., for his untiring exertions and valuable advice during the long period he has deservedly held so prominent a position in the trade of the town. The association further tender their best thanks to him for the faithful advocacy of their interests, and those of the trade generally, in the honourable position of member of the Pharmaceutical Council of Great Britain. The association desires to acknowledge with gratitude the many obligations they are under for the ready and willing manner in which he has, at all times, at much personal inconvenience, placed his abilities and energies at their disposal, and pray that the Great Architect of the Universe may bless him with health and strength to prolong his efforts for the good and welfare of his brother chemists." The address was executed in the best style of the art by Mr. Abraham Johnson, of Silver Street.

Mr. Baynes, on rising to acknowledge the compliment paid him, was received with hearty applause. He said it often happened that in cases of this kind one individual carried off the honours which, in fairness, belonged to others; and he felt that that was the case now with him (No. no). He dared not arrogate to himself anything approaching the terms in which they had chosen to express their recognition of his services; for in respect to earnestness and heartiness he could point to gentlemen who, in their day, had done as much for the trade as he had done. On one ground, perhaps, he might, without egotism, accept that testimonial as true, and that was simply as to length of service. He had from time to time during the last thirty-five years had occasion to use his energies in promoting that which he believed to be for the best interests of the trade. In 1839 the medical council were about making a raid upon the chemists, and he felt that had they succeeded in carrying out their intentions they would have sunk to the low condition of the ordinary trader—that they would have found themselves in the condition of the so-called chemists of Ireland, a mixture of the general dealer and something lower. Then, led out by such men as Jacob Bell, Chas. John Payne, William Allen, and others, an association was formed simply as a trade protection society. They felt their interests were at stake; and out of that effort he was happy to say grew the Pharmaceutical Society, the beneficial results of which were patent to all present. During some twenty-five years he filled the office of local secretary, and in the early part of that time there was occasionally some hard work to do. Now, he thought, the trade, although in serious difficulty in many respects, was, after all, rising in status; and though he knew that would not earn them much bread and butter, still it was most satisfactory to all interested in the trade. They had been driven by Government either to accept a governing body elected by themselves, or the Medical Council, who would have been hard taskmasters indeed. Coming to more local matters, he for many years regretted that they had no local association, such as they now possessed, upon which they could fall back in case of need. They seemed to be a rope of sand; and though they had given him credit for many virtues, he never had the courage to try and form another society. He came in after the formation of the Hull Chemists' Association, and he thought he might say that during the time that had elapsed since its establishment, it had done a good work, in which he was sure others had taken a larger and more onerous share. They had often paid him the compliment of asking his advice, and that he had always honestly and faithfully rendered with a single eye to the advantage of the trade. Although, personally, he was not favourably disposed to testimonials, yet he regarded this as something more than an expression of dry thanks. They had thought fit to clothe their thanks in terms which he should long remember; and he had much rather receive such a token than one of greater intrinsic value. If such expressions were recorded on a simple sheet of paper they would be most acceptable; but placed as they had been on this beautiful work of art, he should ever remember that they conveyed very much more than appeared on the face of it. He concluded by again thanking them heartily for the kind, affectionate, and highly complimentary terms in which they had acknowledged any little service he had been enabled to render them.

Mr. Gates then proposed "The Health of the President," the toast being cordially received and acknowledged by Mr. Anthony Smith.

Mr. Oldham gave "The Healths of the Visitors," associating with it the name of Mr. H. J. Amphlett, who responded.

Mr. Baynes then proposed "The Healths of the Vice-President, Secretary, and Committee of the Hull Chemists' Association," the toast being acknowledged by Mr. G. Myers, vice-president; Mr. C. B. Bell, secretary; and Mr. Oldham, on behalf of the committee.

The proceedings were enlivened with some excellent songs, and the party broke up at midnight, after having spent a very enjoyable meeting.

LIVERPOOL.

CHEMISTS' ASSOCIATION.

The thirteenth and concluding meeting of the session was held at the Royal Institution, May 20, 1875, the President, Mr. A. H. Mason, F.C.S., in the chair.

Mr. E. Davies showed some salicylic acid prepared according to Kolbe's process, and the President exhibited one of Mr. John Williams' milligrade thermometers. After a short discussion on these the President read his valedictory address. After giving a short summary of the papers which had been read during the past session, he referred to an opinion he had expressed in his address at the commencement of the session, that pharmacy was a science and an art, to which opinion, he said, objections had been taken. In its support, however, he quoted the following words of Professor Hofmann at a meeting of the Pharmaceutical Society, held in April last. Professor Hofmann had said:—"It would seem that chemistry, which dwelt its origin to pharmacy, was now, after having almost forgotten this early association, returning in a measure to the source and fountain-head, accepting as it did most gratefully the endless variety of subjects which the researches in pharmacy and the natural sciences allied with it were daily presenting for inquiry." He (the President) would therefore maintain that the strides of progressive knowledge had given to pharmacy a place amongst the sciences; and it was an art far more than a mechanic's art if viewed in all its true bearings, although he admitted that conventionally amongst pharmacists and chemists were included those who simply vend pharmaceutical products and chemicals either in the compounding of medicines or to supply human wants. The President then referred to the new "conversational" meetings which had been held, and he thought these meetings would be much more appreciated if continued another session, as the attendance at the last was much larger, and the expressions of approval by those who were present were encouraging. Eight members and 3 associates had joined the association, which at present numbers 181 members and 19 associates. The attendance at the meetings had, however, been small—comparatively very small; and although this was an evil shared by most kindred associations, it was a matter of regret that the members had not felt the provision which had been made sufficiently attractive for them to attend. The School of Pharmacy had simply proved a failure. The attendance had been so small, the President said, that either the association has filled her mission in providing these classes, or there is room for great alteration. I am inclined to think we make a mistake in having a proviso that a minimum number of students must join before the classes are held; it causes a feeling of uncertainty amongst intending students. Your Council discussed the desirability of withdrawing this proviso by providing fees for the teacher and looking for remuneration from the students. I regret that it did not see its way to obviate the difficulty, at least, not in such a way as our very able teacher, Mr. Davis, could see his way to accept. Mr. Davis, however, voluntarily removed the proviso, and the classes have been held. There are, also, difficulties to contend with; many students have a long distance to come, and it is difficult to arrange a suitable hour which shall be convenient to all concerned. I trust your Council will yet see its way to announce that next session the pharmacy classes will be held irrespective of the number of applicants, for I cannot help thinking there should be a want for such a school in this town. One difficulty, I am thankful to say, has been quite settled during the present session, *i.e.*, the admission of trade questions. A distinct association has been formed with this object, confined to retail traders only. Several members have joined; and

although they have appointed an official secretary, the urgency of their formation has proved such that they have not called a single meeting to accomplish their objects. The President concluded his address by thanking the members of the association for the kindness and courtesy shown to him during his term of office.

A vote of thanks to the President for his address was proposed by Dr. Nevins and seconded by Messrs. Redford and Armstrong. The motion was carried by acclamation, and the meeting closed.

IRELAND.

CHEMISTS' AND DRUGGISTS' ASSOCIATION.

The session of this Association closed on Friday evening, the 30th ult. The classes have been throughout well attended, and when it is said that they have been conducted by Professor Tichborne and Dr. Fraser, further remark would be superfluous. At the conclusion of the course, the Association offered for competition a prize of two guineas, to which Professor Tichborne generously added a second prize of one guinea. Several competed for the prizes; the following were the successful candidates:—First prize, William Furlong, apprentice to Mr. J. T. Holmes, Upper Bagin Street, Dublin; second prize, S. D. Chandler, apprentice to the Apothecaries' Hall of Ireland. Professor Tichborne reported as follows:—

"The answering was generally very good, and five of the candidates scored very high."

A warm vote of thanks was voted to Mr. Hayes, hon. sec., for his untiring zeal in the interests of the Association.

The following gentlemen have been appointed as sub-committee to watch the interests of the Association in the progress of the Pharmacy Act at present before Parliament:—

Mr. E. M. Hodgson, President; Mr. Hayes, hon. sec.; and Messrs. W. Allen, J. T. Holmes, and R. Simpson.

The bill is generally approved by the Association, with some exceptions. So far as the reciprocity clause goes, the Association is quite indifferent. The opinion is, that it would be better to continue the two classes, chemists and druggists and pharmaceutical chemists. The Association is also anxious about the constitution of the first Council, and of opinion that the trade should be well represented there.

A resolution was unanimously agreed to at the annual meeting of the Irish Medical Association, held at the Royal College of Surgeons, on Monday, the 7th inst., approving of the Government Pharmacy Bill now before Parliament, and directing the Council to take measures to support this bill."

On Monday, the 7th inst., Mr. Flux, solicitor to the Pharmaceutical Society, had an interview with the Committee of the Chemists' and Druggists' Association of Ireland, for the purpose of learning the opinion of the Association on the Pharmacy Bill now before Parliament. The following members of the Committee were present:—Professor Tichborne, V.P.; Mr. W. Hayes, hon. sec.; Mr. J. Goodwin, treasurer; and Messrs. W. Allen, J. T. Holmes, J. O'Brien, Stanley Oldham, and R. Simpson.

A long conversation took place between Mr. Flux and the members of the committee. It was understood that the main objection of the Pharmaceutical Society to the present bill is the reciprocity clause. It was explained to Mr. Flux that the Association was quite indifferent about the clause.

Mr. Flux suggested that the Association should oppose the clause, but the committee thought it against the interests of the Association to oppose the bill by opposing a clause about which they were indifferent.

During the interview Mr. Flux stated that the members of the Pharmaceutical Society were willing to extend their operations to Ireland, and make the Irish chemists and druggists "more than brothers, namely, a part of themselves." Plans were suggested by Mr. Flux for the extension of the Pharmacy Act to Ireland, and generally approved by the committee, but it was considered impracticable to introduce any other bill this session, and that if the present bill by any chance fell to the ground the matter might be left in abeyance for some time.

Sir Michael Hicks-Beach has promised an interview to the representatives of the Association, but it is not expected to take place until after the second reading of the bill.

It is generally believed here that Government is determined to carry the bill this session.



THE "APOLLINARIS" WATER.

At the Vice-Chancellor's Court on June 3, before Vice-Chancellor Sir James Bacon, the Apollinaris Company (Limited) applied for an injunction to restrain the defendants, who carry on business under the style of Norrish & Co., at Canterbury Road, Notting Hill, from selling or advertising for sale any mineral or other waters under the name of "Apollinaris Water" or "London Apollinaris Water," or under any other name of which the word "Apollinaris" forms part, and for an account of profits.

of profits. "Apollinaris" water is a natural mineral water obtained from a spring at Ahweiler, in Prussia, called the "Apollinaris Spring." In 1873 the owners of the spring entered into a contract with Mr. Edward Steinkopf and Mr. George Smith, who acted on behalf of the plaintiff company, granting to them for ten years from January, 1874, the exclusive right of sale of the "Apollinaris" water in Great Britain and her colonies. The plaintiff company carry on business at 19 Regent Street, and have sold, and are still selling, very large quantities of the genuine "Apollinaris" water. The plaintiff alleged that the defendants had for some time been carrying on a trade in a mineral water, and that they had been manufacturing and selling the genuine "Apollinaris" water, and that the sale of such inferior article was calculated to depreciate the reputation of the water sold by the plaintiff company and to injure their trade.

Mr. Kay, Q.C., Mr. Horace Davey, and Mr. Maine appeared for the Apollinaris Company; Mr. Foulkes, Q.C., and Mr. Cozens Hardy for the defendants.

The Vice-Chancellor held that the plaintiffs had shown, sufficiently at least for the purposes of the injunction, that they had the exclusive right to the use of the word "Apolinarius", and that the defendants had infringed that right by making use of that name. The defendants ought to have said fairly that they were producing an imitation of the genuine "Apolinarius" water. The use of the word "London" as a prefix was not enough to protect them. He granted the injunction restraining the defendants from using the word "Apolinarius" in any way that would be calculated to deceive the public.

EPPS'S COCOA MAY BE SOLD.

An important appeal case was decided in the Court of Common Pleas, on June 7, by Mr. Justice Brett and Mr. Justice Denman, under the Adulteration of Food, &c., Act.

The appellant, who was a grocer at Spalding, upon being asked for a quarter of a pound of cocoa, delivered to the respondent an ordinary packet of Epps's cocoa, without making any verbal statement as to its contents. Upon the face of the packet were the words "prepared cocoa, for ingredients see the other side," and upon the back, "cocoa contains a bland oil which is pre-eminent as a vitalizing substance; to render the oil soluble and easy of digestion, it needs to be combined with just so much loaf sugar and West India arrowroot as will effect its perfect incorporation. In the preparation of the cocoa contained in this packet we guarantee that no other ingredients than those mentioned are used." The respondent bought the packet for the purpose, then, of having the cocoa analysed, and it was certified to contain 10 per cent. of cocoa, 44 per cent. of sugar, and 16 per cent. of starch. The information, under section 2 of the Act, charged the appellant with having sold as unadulterated cocoa, cocoa that was adulterated. The Justices convicted the defendant and fined him 40s., and stated this case for the opinion of the Court upon the validity of such conviction.

The Court quashed the conviction, holding that, assuming the cocoa could be properly said to be "adulterated cocoa," still it had not been sold as unadulterated. The mere handing of the packet did not constitute a complete sale, passing the property into the purchaser. It was open to him if it did not correspond with what he had asked for to reject it. And here there was a

printed statement which immediately brought to the notice of the purchaser the fact that the article was a preparation of cocoa and the ingredients of which it was composed. Therefore, whether it was true or not, as had been stated, that the mixture of some such ingredients was necessary to make pure cocoa edible, this cocoa could not be said to have been sold as adulterated.

LONDON BANKRUPTCY COURT.

RICHARD CONDY, Drug Merchant, Garlick Hill and
Duke Street. Adelphi.

This case was noticed in our last issue. The debtor had petitioned under the liquidation clauses, and the following are returned in the list of creditors:—

	£	s	d.
The Liquidators of the Santander Iron Ore Company . .	1	180	0
The National Bank, Charing Cross	692	1	3
A. Walker & Co. Rotherhithe Street	594	0	0
Owen & Wells, 7 Westminster Chambers	594	0	0
A. W. Powell, 2 Commercial Buildings, Gloucester . .	507	10	0
V. J. Bussey, North Crescent, Bedford Square . . .	557	4	0
W. Schuchoff & Co., Great Winchester Street Buildings	342	1	0
Krauss & Frith, 44 Leadenhall Street	339	5	0
R. Forrest, 6 Duke Street, Adelphi	277	4	3
Theodore Scott & Co., 100 Strand	276	17	0
The British Mutual Investment Company	246	13	0
H. B. Condy, 6 Billiter Street	205	3	6
J. Holland, distiller, 100 Strand	195	0	0
Pinkerton & Co., Botolph Lane	160	2	0
Ind. Coop. & Co., Midland Station, St. Pancras . .	150	0	0
R. Hills, Wilson Street, Finsbury	150	0	0
Imperial Chemicals, 100 Strand	148	12	0
The Westminster and General Life Insurance Association . .	135	0	0
Johnson & Bushnell, 150 Leadenhall Street . . .	128	5	1
The Liquidators of the Cwin Llan Lead Mining Company . .	125	0	0
C. Hepesin, 37 Mark Lane	123	0	0
W. R. Philip, 17 Queen Victoria Street	120	0	0
Meinertzhagen, Bell & Co., Mining Lane	113	0	0
F. & R. Green, 9 Waterloo Place	105	0	0
W. P. Maneco, 10 Clement's Inn	104	2	6
H. Rony, Rue de Tourbidge, Paris	92	0	0
J. D'Almeida & Co., 34 Mark Lane	85	0	0
The North Western Bank (Limited), Liverpool Hall & Son, 33 Lime Street	82	4	9
G. Barlow, 21, 23 & 25, Abchurch Lane	50	16	11
E. Campden, 36 Mark Lane	48	10	0
Hampton & Sons, 8 Pall Mall East	47	13	11
Jessop & Humble, 43 Mitreing Lane	42	6	0
W. H. Hume, 22, 24 & 26, Abchurch Lane	42	6	0
Blundell, Spence & Co., Upper Thames Street . . .	26	5	0
W. Liddall, 15 Union Court, Old Broad Street . .	25	0	0
Savrage & Co., 52 Watling Street	21	6	0
Dr. Reynolds & Co., 21, 23 & 25, W.C.	21	6	0
F. C. Johnson, 57 and 58 Great Tower Street . . .	21	11	6

On June 3 Mr. Philip applied for the extension of an injunction restraining Mr. Edwin Hills, of 42 Wilson Street, Newbury, from removing certain property claimed by him from the debtor's premises. He stated that at a meeting held on the previous day it was resolved to liquidate the debtor's affairs by arrangement, but the resolutions had not yet been registered. Mr. A. H. Miller appeared for Mr. Hills. An extension of the injunction was granted upon the understanding that the question between Mr. Hills and the trustee should be brought before the Court for determination without delay.

F. A. & M. ZIMMERMANN, 1 Aldgate Buildings, Fenchurch Street.

The debtors, Ferdinand Auguste Zimmermann and Moritz Zimmermann, carrying on business as importers of fine chemicals, dyes, and chemical apparatus, have filed a petition for liquidation, on arrangement or composition, in which they return the liabilities at 100,000*l.*, the assets not yet being ascertained, but comprising stock exceeding 10,000*l.* in value. The case was mentioned to the Court by Mr. Finlay Knight on June 5. He read an affidavit showing the necessity for the appointment of a receiver and manager, and stated that Mr. William Edwards, accountant, 18 King Street, Cheapside, was nominated to the office. Acceptances to the amount of 60,000*l.* were overdue, and other acceptances were falling due. Orders were being taken daily, and it was extremely important for the business to be carried on until the meeting of creditors, which was appointed for June 25. The business was a very extensive one, and goods of considerable value were daily arriving from all parts of the world. Creditors to the amount of 14,000*l.* approved of the appointment of Mr. Edwards as receiver and manager. Mr. Registrar Spring Rice accordingly made the desired appointment.



THE ADULTERATION OF FOOD BILL.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I was commanded in May, 1874, to watch the course of the Food and Drugs Bill.

I may be wrong in attempting to intrude on your journal.

The chemists and grocers are subject to the same liabilities under Clause 13 as it stands to-day in Committee before the Lords.

Clause 13 necessitates that the assistants of grocers and druggists should be made acquainted with the requirements of the bill if it passes into an Act.

I refrain from any attempt to encrease further upon your columns,

And am, sir, yours truly,

39 Mincing Lane, E.C. R. M. HOLBORN.
June 11, 1875.

TRADESMEN AS PUBLIC ANALYSTS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Your summary of last month contained an allusion to a letter written by me to the Council of the Pharmaceutical Society on the subject of the appointment of traders in articles of food and drugs as official analysts under the Adulteration Act.

The Council of the Society named could see no inconsistency or unfairness in the system of one of a community of traders in each large town being installed as the virtual judge and arbiter of the value of the wares of his brother tradesmen, provided, of course, the elected be "a member of our Society." One member of the Council, a Mr. Bottle, even went so far as to assert that the objection against so agreeable and perfect an arrangement must necessarily be the outcome of "trade jealousy" on the part of the writer of the letter.

I have to congratulate that same Mr. Bottle on his display of unusual sagacity and good taste, since a superior body to that to which he belongs has recently endorsed the very principle for which I contended in my letter; the House of Commons has, in fact, accepted as far as practicable Dr. Playfair's amendment disallowing in the future the appointment as public analysts of men who are drug and food vendors in the same district in which the official functions of analyst are required to be exercised.

This is, indeed, no more than might be expected from an intelligent and disinterested body of men, who had not hopelessly committed themselves to an opposite expression of opinion on the matter.

I must not, however, omit to acknowledge the fair spirit and incisive character of the remarks of Messrs. Hampson and Frazer. Those were at any rate two members of the Council whose judgment was not warped by their position in respect to the matter under discussion. As for Mr. Bottle, the fact of his making his remarks an exception to the gentlemanly tone which characterised those of the other speakers, I take it, shows that he feels with unusual warmth on the subject, and probably still thinks himself justified in his gratuitous dirt-throwing. If so, I venture to say he may satisfy himself by handing the letter alluded to over his counter consecutively to any ten of his intelligent customers, and if the verdict of nine be not favourable to the conclusions arrived at therein, I will go to the length of pronouncing his remarks on the occasion referred to to be those of a gentleman.

It seems idle again to disavow any personal motive in writing to the Council, for I am unable to believe that any intelligent, disinterested, and properly disposed person, after carefully reading my letter, could come to any other conclusion than that a system, not an individual or individuals, was therein attacked.

I am, sir, yours,

Bradford: June 9, 1875.

H. G. ROGERSON.

THE RANGE OF HOMOEOPATHY.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In your May number you have a critique upon my article "On the Range of Homoeopathy." I can certainly find no fault with the spirit in which your reviewer writes, and I most cordially agree with his concluding sentence: "The fact is, life (at any rate until its conditions shall be more fully understood) is a more complicated affair than any one system can meet fully"; moreover, "so long as we see human beings seek a cool breeze in summer, or a warm fire in winter, I shall not throw away all faith in the antipathic system of treatment" as a means of temporary alleviation, or, as is perhaps more strictly the case in the instances adduced by your reviewer, when such apparently antipathic treatment merely consists in the attempt to produce a normal relation of the "surroundings" to the organism. I trust, however, I shall not be thought captious if I point out one or two passages in your critique to which I feel disposed to take exception.

1. "In discussing the treatment of sorrow arising from bereavement, for example, Dr. Scott has evidently taken as a disease what is nothing of the kind. He would hardly call a broken leg a disease, we suppose. But the pain occasioned by an accident or a wound is nearer the physical analogue of the mental suffering which bereavement leaves than disease properly so termed can be. There is no sudden or specific cure for the disease in either case."

Now, I accept your comparison in general, but not quite as to all its particulars. The fracture or other accident I am willing to adopt as the analogue of the death of the friend, and the pain occasioned by the accident or wound as the physical analogue of the mental suffering resulting from bereavement. It is not quite correct to say that there is no "sudden cure" in either case, if by "cure" is meant merely a cessation of the suffering of longer or shorter duration. A sufficiently large dose of opium or chloroform will temporarily effect this in both cases; certain diseases of portions of the sensory tract in the spinal chord, causing sensory paralysis of the affected limb, will produce permanent anaesthesia in the first case, and a sufficiently prolonged and reckless course of frivolity and dissipation will, unhappily, be productive of analogous lasting mental insensibility in the other. But the natural grief arising from bereavement I have no desire to check; on the contrary, I expressly said that "it ought to know no end on this side of the grave," and this for two reasons—1. Because such cessation would be indicative of the superelevation of heartlessness and insensibility; 2. Because such grief is in itself a wholesome moral discipline. I have the heartiest contempt for any man who ever "gets over" (as it is called) the loss of one whom he has really loved, and who does not always feel that such loss has left a void which can never be filled up. Here, I admit, the case so far differs from that of the pain resulting from an accident, that I would gladly assuage or annihilate the latter by any means not in themselves injurious, but if, as in the case of mental grief, this could only be effected by measures which would engender permanent insensibility, I should advise the sufferer to bear his temporary discomfort, rather than purchase exemption at such a cost.

But in both cases the natural suffering may run on to what is unquestionably a disease. In the former case we may have hectic and pyæmia; in the latter, morbid sorrow. Waiving for the present the question whether the former are to be treated homoeopathically or otherwise, I still maintain that the latter is to be so treated. And this leads me to the second point in your critique on which I wish to animadvert.

2. "Though it may be that a sorrower is relieved to some extent by sympathy, that is something very different from homoeopathy, as Dr. Scott very well knows."

If I understand your reviewer aright, he here means by "sympathy" the sympathy shown or expressed to the sorrower by his friends. If this is your reviewer's meaning, I most cordially agree with his statement that it "is something very different from homoeopathy," for even where such "sympathy" is not mere pinchbeck, it is seldom much better than an alloy of officiousness and folly. It is the fashion to sneer at "Job's comforters," and certainly they failed to exhibit a model of consolatory wisdom. But even Eliphaz the Temanite, Bildad the Shuhite, and Zophar the Naamathite, might, in some respects, be imitated with advantage by their modern representatives,

for the former "sat down with Job upon the ground seven days and seven nights, and none spake a word unto him, for they said that his grief was very great;" the latter would, inevitably, in the same period, have poured forth such a cataract of "good advice" as could hardly have failed to overwhelm any little mental vigour which the sorrower had remaining. What I meant by "sympathy" was that shown by the mourner to others, not that shown by others to him: this is clearly what is meant, too, in the passage quoted by me from Wordsworth, and I think we have here the true explanation of the "sort of relief, such as it is, which we derive from hearing of others who are even more wretched than ourselves." The action here seems to me homoeopathic. Even the sympathy shown by others must not be "antipathic," at any rate, if it is to do any good. Take another instance from Shakespeare; when Cardinal Pandolph seeks to soothe Constance for the loss of her son Arthur, he makes use of the well-meant platitudes (natural enough in the mouth of an ecclesiastic, who, as Constance said, "never had a son"), "You hold too heinous a respect of grief"; but, after a few sentences, Constance replies:—

Grief fills the room up of my absent child,
Lies in his bed, wakes up and down with me,
Puts out his pretty looks, repeats his words,
Remembers me of all his gracious parts,
Stuffs out his vacant garments with his form;
Then, have I reason to be fond of grief.
Fare you well; had you such a loss as I,
I could give better comfort than you do.

This language has found an echo in the hearts of many mourners of less passionate and uncontrollable impulses than Constance.

3. "Suppose a mind to be clouded and gloomy, with no just cause—a true case 'of mental disease.' (I grant this is a true case of 'idiopathic' mental disease; but there may be morbid grief even from a just cause—a sort of 'symptomatic' or secondary mental disease.) Homoeopathic treatment would be the provision of lugubrious and melancholy subjects of thought. (This seems to me rather too generally assessed.) We are disposed to think a little mirth and frivolity—the antipathic treatment, in fact—would be the wisest."

From this last sentence I differ *toto celo*. A melancholy hypochondriac, or a hypochondriacal melancholiac, will, I think, best be shamed or stimulated out of his egotistic self-engrossment not by any such means as these, but by endeavouring to draw his attention away from himself and to fix it upon the real sorrows of others in the world around him, which, unhappily, are neither far to seek nor hard to find. It is easy to produce instances in point. One of the most indolent, sensual and selfish, communities of modern times was, I suppose, that of the "Southerners"; accordingly, mental diseases of all kinds, such as melancholy, hypochondriasis, and so forth, were rife among them in their prosperous days—just the very days when "mirth and frivolity" most abounded, and their life most closely resembled what Carlyle calls "a foolish Bartholomew Fair." These mental ailments were said to be especially attentive in their visits to the more beauteous half of the community, who (according to a cynical writer I once read with much pain) are apt even to outstrip their less attractive compeers in the career of indolence, frivolity and selfishness. Now, it was matter of general remark that after the commencement of the late American War, when real sorrows and anxieties took the place of morbid fancies and fictitious sensibilities—when, moreover, the means of "mirth and frivolity" were greatly curtailed—the number of cases of mental disease was amazingly lessened. Actual physical pain is often—or, at least, sometimes—the sole cure of morbid melancholy. It was so in the case of Jerome Cardan, who himself tells us that he frequently bit his own lips and scratched or pinched his own arms, just to get rid of the mental unrest he suffered when free from bodily uneasiness. Again, Boswell tells us of a tradesman who, having acquired a large fortune in business, retired and went to live at Worcester. His mind, being without its usual occupation, and having nothing else to supply its place, preyed upon itself, so that existence was a torment to him. At last he was seized with the stone, and a friend who found him in one of its severest fits having expressed his concern—"No, no, Sir," said he, "don't pity me; what I now feel is ease compared with that torture of mind from which it relieves me."

4. "If I think many humors *serve* him," would be the scientific treatment if we carried the range of the homoeopathic principle into all departments of morality."

Pardon me; it would be no such thing. The cure for malice

and hatred in our own hearts seems to me strictly homoeopathic, and is in no way inconsistent with the precept of Scripture. It consists in directing that malice and that hatred against those very identical evils in ourselves which have led to the conduct of which we complain in our enemy; and this can hardly fail to lead to that conduct on our part towards our adversary which is enjoined by the Apostle.

I regret that your reviewer should have felt it necessary or expedient to refer to my article as inculcating "spiritual homoeopathy." I do not say the term is wholly inappropriate, but it has been used on other occasions in a very different sense—to indicate doctrines and practices to which I should be most unwilling to commit myself. I know very little about so-called "spiritualism," and so offer no opinion upon the reality or non-reality of many of its alleged phenomena, whatever I may think of the hypothesis on which they are sought to be explained. But it has been so much the fashion among the uninstructed to associate homoeopathy with every strange and fantastic vagary which may from time to time have sprung up that I am always annoyed to find the term used, in a more extensive sense than that to which it has a right, viz., the belief in the doctrine of similars as the basis of an important department of medical practice. My assertion that the law is applicable also to what may be termed "mental and moral therapeutics and hygiene," though an extension of the doctrine beyond the limits contemplated by some of its earlier propounders or recognised by many of its present adherents, in no way removes it from the region of the strictly natural, or connects it with what is called "spiritualism," with which and many other extravagances it has been ignorantly associated. This unfortunate misconception has been so long fostered by the interested and wilful misrepresentations of the *Lancet* and such-like periodicals that it becomes doubly incumbent on all really candid magazines to protest against the groundless calumny.

In conclusion, I have to express my regret for taking up so much of your valuable space.

Yours faithfully,

W. B. A. SCOTT, M.D.

6 Calverley Parade, Tunbridge Wells,
May 20, 1875.

A CHEMIST'S GRIEVANCE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I am a chemist—nay, more, I am a member of that learned society cleft the Pharmaceutical. What it cost me to attain my present honourable position is neither here nor there; at least, it certainly is not here. I most devoutly wish it were; and where it is is known only to those Fates who are supposed to preside over the distribution of the spoils of pharmaceutical fledglings. I have but to regret that my mistaken guardians did not bring me up to any other calling than that to which I was dedicated. I envy the itinerant tinker his honest trade and happy independence; and the profession of the sprightly shoe-black or sedate crossing-sweeper has charms in my eyes!

I commenced business in a densely populated neighbourhood, and made way finisely. Other chemists opposed me, it is true, but I managed to hold my own, and did not grudge them the customers who supported them. Things went on thus for many months, and then a rumour began to circulate that a "self-supporting dispensary" was about to be opened in my immediate vicinity, under the management of an M.D. Now as the legitimate business of a chemist is to *dispense* medicines and not prescribe them, so the legitimate business of a doctor of medicine is to prescribe and not dispense. Reflecting on this, I did not allow the advent of the "self-supporting" to affect my spirits, thinking that the *amour propre* of the M.D. would not allow him to do anything *infra dig.* Alas! mistaken mortal that I was! The "self-supporting" commenced issuing cheap handbills (a method of 'touting' which I am sure no respectable chemist would adopt), setting forth that patients would be seen at the dispensary and supplied with medicine at 1s. per week! *O moros! O tempora!* Consequent on this retailing of medical services and medical requirements on economical principles, my business began to decrease; for who would physic himself with castor oil or tincture of rhubarb when for the money which must be spent in those medicaments he could consult a real

M.D., and be supplied with the required medicine? Antibilious pills were at a discount, and salts and senna drugs in the market, literally and metaphorically; for in the market they remained. Though my returns fell off I still managed to exist, and in course of time I found many of my former customers return, giving the preference, after due trial of both, to my unsophisticated salts and senna over that of the "self-supporting," sold under the name of "the mixture." I might now have been happy and contented; but another trial awaited me. Within a few hundred yards of my shop another shop was opened. The fittings too plainly showed that I had further opposition to contend with, and my cup of misery was filled when the name of the new comer was disclosed, through the medium of golden capitals, to the public, and following the name those significant letters, M.R.C.S.! I must say, in justice to the man who fitted that shop, that he displayed great taste. The stock, too, was well chosen and complete, everything being kept, from hair-oil and night-lights to Rimmel's perfumery.

Now it strikes me that this state of things ought not to be. The law enacts that no one shall commence business as a chemist and druggist who has not previously passed an examination to test his knowledge of materia medica, &c. Why is this? Because it is supposed that the business of a chemist chiefly lies in dispensing prescriptions. Sir, I do not believe that there is a surgeon within a mile of my residence who does not dispense his own medicines! The law further enacts that no chemist shall visit or prescribe! Now, supposing this law to be observed strictly, can any one tell me how is a chemist to live? or, allowing that it is not strictly observed, as I am thankful to say it is not, and that chemists are satisfied to concede to medical men the privilege of dispensing their own medicines with the tacit understanding that they—the chemists—do a little counter prescribing, surely it is not right that the medical profession should trespass still further on our rights and keep open shop to supply the multitude with the various little et ceteras which help to make up the chemist's returns. Medical men may cry out against prescribing chemists in vain so long as they give them no dispensing, but they must be sanguine indeed if they hope for redress so long as members of their own body compete with us in retail.

So far as the "self-supporting dispensaries" are concerned, I, as a chemist, have nothing to say about them, but, as a man and a gentleman, I must say I am at a loss to understand how a member of a liberal profession can so far pocket his pride and lower the dignity of the profession as to take 1s. fees from paupers. It is not charity which prompts him, for there are plenty of institutions where the poor can receive gratuitous advice and medicine, and yet not be regarded as paupers.

I am, sir, yours, &c.

A. VICTOR.

PURE SHELLAC.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In the February number of *THE CHEMIST AND DRUGGIST* of the present year "A Factory Surgeon" asks for a test for impurities in shellac. As I have seen no answer to that query, I venture to send the following, hoping that some gentleman with more leisure than I have will kindly investigate it, and give us further information on the constituents and adulterations of the shellacs. I imagine that lemon shellac is the most pure, as it is certainly the dearest, except white shellac. I therefore dissolved 25 grs. of lemon shellac in 1 drachm of sulphuric acid. On the addition of distilled water, an elastic, black, soft gum was formed, sinking to the bottom of the vessel. After washing to free it from the acid as much as possible, I dissolved it in rectified naphtha. A little of this put into a test tube, and decomposed with water, produced a milk-like fluid. On the addition of a few drops of Liq. Amm. Foet., a bright amber colour was soon after the result, with scarcely any sediment. This I considered to be free from adulteration, for the following reasons:—

The same shellac dissolved as before with the addition of one third resin gave a copious sediment and dull solution.

Similar results to the last followed with orange and garnet shellacs without the addition of the resin. White shellac produced a milky appearance, but free from sediment, or nearly so.

A sample of button shellac, said to be pure, was tried. It dissolved very slowly in the acid, and after washing, several

white pieces separated from the remainder of the lac, and under the microscope had the appearance of cellular tissue. There was no sediment whatever to this shellac.

I afterwards operated on the precipitates by adding a little acid hydrochlor. to neutralise the ammonia; a copious sediment resulted. To this sediment I added rect. naphtha, when it immediately became a compact and glutinous-like substance, rising from the bottom to the top of the tube, and evidently not soluble in naphtha, the natural solvent of shellac.

I do not know whether this communication will be of any service; if you think so, kindly give it ventilation, so that we may have the opinions of others, and thus arrive at something like the truth. Shellacs are at present enormously high in price, and therefore there exists a most favourable opportunity for adulteration. I am, sir, yours respectfully,

Bristol: May 28, 1875.

JAMES STATHEN.

SYNONYMS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—In reading over the list of synonyms in your last number, I find several with which I am familiar omitted. I therefore have jotted them down, with a few more, which I collected from old books during a spare hour.

If you think they are worth publication, they are entirely at your service, Yours truly,

J. S. HARRINGTON.

Anthreco Kali	A mixture of hydrate of potassium and kiesel acid.
Armenian Stone	Native carbonate of copper.
Anti-attribution	An eluvium of lard, camphor, and black-lead.
Blue butter	Ointment of mercury.
Chalcidanthum	Sulphate of iron.
Colobanth	Red oxide of iron.
Crab's eye	Prepared chalk.
Crocus	Red oxide of iron.
Disacordium	Syrup of poppies.
Dry lemonade	Citric acid.
Elixir propiati	Compound tincture of aloes.
Elixir sacrum	Tincture of rhubarb and aloes.
Essence of smoke	Crude acetic acid.
Extractum Cleute	Extract of hemlock.
Extract of Panchymagogum	Compound extract of rhubarb (Ph. Lond.).
Four thieves' vinegar	Aromatic vinegar.
Green blue	Native carbonate of copper.
Green Pomphian ointment	Emplast. Mellot.
Hungary water	Spirit of rosemary.
Jew's pitch	Asphalte.
King's cup	Lemonade.
Kitchener's peristaltic persuaders	Ph. Rhel et Carui.
Lapis ophthalmicus	A fused mixture of sulphate of copper, alum, camphor, and nitrate of potash.
Mel. Egyptiacus	Lin. zereculi.
Microcosmic salt	Ammonio-magnesian phosphate.
Mountain green	Native carbonate of copper.
Oil of flints	Solution of potash.
Pectoral decoction	Infusion of potash.
Philosopher's wool	Oxide of zinc.
Prepared oyster-shell	Powdered cuttle fish.
Reaglar	Red arsenic.
Roussens's ladanum	Vin. opiatum.
Saffron of copper	Suboxide of copper.
Sal amara catharticum	Sulphate of magnesia.
Sal atrium	Bicarbonate of potash.
Sal auril philosophicum	Bisulphide of potash.
Sal martis	Sulphate of iron.
Sal vitriolatum	Sulphate of iron.
Salt of steel	Sulphate of iron.
Scotch pargorie	Tinct. Opil Ammon.
Shoemaker's black	Sulphate of iron.
Soluble tartar	Tartrate of potash.
Strengthening plaster	Emp. Roborans.
Tasteless salt	Phosphate of soda.
Tinctum japonicum	Tincture of catechu.
Tinctum martis myrsinifid	Tinct. ferri ammonio-chloridi.
Traumatic balsam	Tinct. benzoini.
Turpith mineral	Hydrarg. oxyd. sulphuricum.
Valingais (De) solution	Liq. arsenici chloridi (Ph. Lond.)
Ward's paste	Confect. piper nigri.
White ink	Liquor potasse.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

DEAR SIR,—I beg to contribute an addition to the list of "Pharmaceutical Synonyms" which appeared in the last number of *THE CHEMIST AND DRUGGIST*. They are gathered from a

miscellaneous collection of old and fanciful names written from time to time in my pocket note book, just as they occurred; but I have omitted (as nearly as I could) those you have already published.

The majority are quite familiar to me, having been inquired for by the public, as they appear, in different parts of the country, while the remainder have been gathered from various sources.

In the admirably compiled lists of your correspondents I notice several definitions of technical terms which to my mind appear wrong, at least the rendering is contrary to what I have found in my experience; notably the following:—

1. Chloric Ether = Spirit. Chloroform = Chloric ether is generally considered double the strength of the P.B. sp. chlor.

2. Hoffman's Anodyne Spirit = Spiritus Etheris. — One authority is Squire; nevertheless, the original Hoffman's anodyne was the sp. etheris co. (containing ethereal oil), not now official; but in its place the simple spirit occurs, which, as it is nearly allied to the original, has received the name, by some, of Hoffman's spirit. But in most pharmacies both preparations are kept in stock.

3. Lenitive Electuary = Confection of Prunes. — Mr. Wright has the date of the Pharmacopoeia in which it was so called 1746 (very far back); nevertheless the term "lenitive electuary" is almost universally considered to refer to the confection of senna, and in the later Pharmacopoeias than that quoted the name alluded to is applied to that preparation, viz., conf. sennæ.

4. It is a matter of dispute whether chenopodium or santonica is entitled to the name of worm seed (I think from its efficacy the former is more deserving), but as to sem. hyoscyami having reputation as an anthelmintic, my therapeutical knowledge is not sufficiently great to call in question. — I remain, sir, yours sincerely, JAMES B. L. MACKAY.

17 Cornhill, Ipswich, June 9, 1875.

Algaroth's powder	Oxychloride of antimony
Amiantus	Fine asbestos
Argentum	Engagement plumbi, alb.
Arhail	Litmus
Argentine flowers	Oxide of antimony
Argentum vivum	Mercury
Aluminium	" sutorium
" Baker's salt	Sulphate of iron
Balsenwort	Carbomate of ammonia
Balsam	Belladonna
Barberry	Byrd. precip. alb.
Barley	Litmus
Bar's foot	Fortid hellebore
Beauly's disinfectant sol.	Solution of chloride of lime
Bitter	Solution of chloride of lime
" root	Uva
Black cohosh	Gentian
" jack	Actea racemosa
" lead	Sulphide of lead (native ore)
" snake-root	Alotropic modification of carbon
" sugar	Actea racemosa
" wash	Liquorice
Blackberry	Lolio hydrargyri nigra
Blistering liquid	Uva ursum
Bogdan	Liquor epispasticus
Blackbean	Menyanthes trifoliata
Barnett's fluid	Solution of chloride of zinc
Calcareous nitre	Nitrate of lime
Campeschy wood	Liquor leucostyli
Caper spurge	Euphorbia
Caw	Sulphate of barium
Cedrine	Sulphate of strontium (native ore)
Cerasus	Lead
" vera	Carbomate of lead
Chili sulphate	Nitrate of soda
Christmas tree	Black hellebore
Chineses Russid.	Impure potash
Chinabar	Sulphate of mercury ore
Chick's solution	Sol. of permanganate of potash
Cody's crimson fluid	" " " "
" green do.	" " " "
Coppens	Sulphate of iron
Corn poppy	Nitrate of soda
Count Palma's powder	Magnesia alba
Cowage	Dolichos pubes
Crow's eyes	Crataegus
Crusall	Gernium
Crocus solis	Oxide of lead
Crow's eyes	Nux vomica (seeds)
Crode tartar.	Carbomate of potash
Chrysocolla	Borax
Crystal mineral	Saltpetre (fused)
Cubion nitre	Nitrate of soda
Cuckoo plant	Arum maculatum
Cudbear	A colour obtained from lichens
Cutch	Black catechu
Dady's elixir	Tinctura semina co.
Deadly nightshade	Belladonna
Decoctum camphani	Decoctum haematixyli
" sparti	scoparii
Dephlogisticated gas	Oxygen
Davy's dung	Assafoetida

Devil's sugar	Acetate of lead
Divale	Belladonna
Earl of Warwick's powder	Pulvis scammonii co.
Easton's syrup	Syrupus ferri et quinine phosphatis
Elkix of Nature	cum strychnia
Elastic weed	Tinctura aloes comp.
Emphyral air	Lobelia inflata
Enula	Oxygen gas
Essence of tar	Elecampane
Exeter oil	Crescent of soda
Extractum elote	Oleum viride
Falsa aulla	Extract of water hemlock
Fendula	Hyoscyamus seeds
Pellwort	Gentian
Peril linatum	Scilla filings
Ferrug.	Red oxide of iron
Fish glue	Isinglass
Flagwort	Acorus calamus
Flake-white	Carbomate of lead
Flaming nitre	Nitrate of ammonia
Fleasant	Pennyroyal
Flower de Luce	Iris Florentina
Flowers of Benjamin	Benzoic acid
" brimstone	Sublimed sulphur
" sulphur	Acetate of potash
Foliated earth of tartar	Digitalis purpurea
Foxglove	Olibanum
Frankincense	Belladonna
Furious nightshade	Gaulthier
Galacine	Native sulphide of lead
Galena	Papaver somniferum
Garden poppy	Nutmeg
Golden asorn	Borax
Golden glue	Ung. plumbi subacet. co.
Gould's cerate	Variety of carbon (proper name for blackish)
Graphite	Pil. plumbi c. opio
Grave's pill	" Coloc. comp.
Gregory's pill	Pil. aloes Barbados
Ground bolly	Juniper gum
Gum sandarach	Frankincense
" This	Sulphate of lime
Gypsum	Pil. aloes Barbados
Hamilton's pill	" Colocynthidis et hyoscyami
(Jarr.) pill	Liquor ammonia
Hartshorn	Sulphate of heavy
Heavy spar	Mixture ferri aromatica
Henbane	Hyoscyamus
Hogbane	Holly
Holm, or Holm	Aces with carella
Holy bitter	Lignum hematoxili
Honduras wood	Chloride of silver (fused)
Horn silver	Hydrargyrum ammoniacum
Hyd. precip. alb.	Infusion of buchu
Infusum diosme	Catechu
Japan earth	Carbonic acid
Jatropha acid	Chloride of lime
Jentil's bark	Bicarbonate of potash
Kali acetum	Nitrate " "
" nitratum	Sulphate " "
" vitriolatum	Acacia catechu
Khair tree	" Oriment
King's yellow	Yellow sulphide of arsenic
Labarraque's disinfectant fluid	Liquor sodæ chlorate
Lapis calcareus	Limestone
" prunelle	Fused nitrate of potash
Lasex	Assafoetida
Ledoyen's disinfectant fluid	Solution of nitrate of lead
Lignum vitæ	Gaulthier wood
Litumamentum cantharidis	Liq. epicurici
Lix. chloroformic	Chloroform
Lisbon diet drink	Dec. sarge co.
Litharge	Plumbi oxidum
Lords and ladies	Arum maculatum
Luna caustica	Nitrate of soda
" fixata	Oxide of zinc
Magistery of bismuth	Subnitrate of bismuth
Magnesia usta	Calcined magnesia
Mandrake	Podophyllin
Marine acid	Hydrochloric acid
March trefoil	Menyanthes trifoliata
Maw seeds	Poppy seeds
May apple	Podophyllin
Melanaphedum	Black hellebore (Greek name for)
Mephitic acid	Carbonic acid
" alr.	Calomel
Mercurius dulcis	Achillea millefolium
Miffoil	Subcarbonate of soda
Mineral alkali	Acetum
Monkshood	Artemisia montana
Mountain ash	Sinabar
" damson	Artemisia
Mug wort	Sambal root
Musk root	Carbomate of soda (impure)
Natron	Neatfoot oil
Nerve Oil	Sulphate of soda
Nitrum vitriolatum	Oleum viride
Oil of cabbage	British oil
" Petre	Oil viride
" St. John	Lithmus
Orchill	Ricinus communis
Palma christi	Opium
Papaveris lachryma	Compound syrup of the phosphates
Parish's slyon	

Pearlash	Crude potashes
Pearly white	Subnitrate of bismuth
Phlogisticated air	Hydrogen
Phlogeston	
Planché's purgative potion	Mixture scammonii
Plumbago	Graphite
Plummer's pill	Hydriargy. subchlor. co.
Polychrest salt	Supercarbonate of potash
Poor man's herb	Hyssop
Potasse hydrie	Caustic potash
" hydrosulfur.	
Pulvis pallasii	Guarana
Quadrangular nitre	Nitrate of soda
Quicksilver	Mercury
Raging nightshade	Sedidonna
Ratbane	Nux Vomica
Reaumur	Red arsenic
Red precipitate	Red oxide of Mercury
Rochdale salt	
Rochelle salt	Tartrate of soda and potash
Rochelle alum	Iron alum
Rouge	Red oxide of iron (finally levigated)
Sacred elixir.	Tinctura rhub. co.
Sal cathartics amara.	Epsom salts
" cornu cervi.	Ammon. carb.
" maris	Phosphate of iron
" natri	Nitre
" saturati.	Acetate of lead
Salt of Denepe	Sesquioxide
" harsheston	Carbonate of ammonia
Sandaracha	Red arsenic
Savin de verre	Manganese
Scotch pargaria	Ammoniated tincture of opium
Scheele's acid	Hydrocyanic acid (5 p.c. of H. cy.)
Sedative salt.	Borax
Silphine	Assafoetida
Sosp bark	Cortex quilla
" glass	Manganese
Spanish juice	Liquorice
" whitening	Prepared chalk
Snake root	Sesquioxide root
" weed	Bistort
Sosp bark	Cort quilla
Sol. saturati.	Idi. plumbi embaceticis
Sory	Sulphate of iron
Speedwell	Veronica
Speltar	Zinc
Splunkard	Manganese
Spiritus nitri	Nitric acid
Sodium	Oxide of zinc
Spotted arum	Arum maculatum
Spunkard	Libanus
Squinting cucumber	Momordica elaterium
Starch wort.	Arum maculatum
Stomachic elixir	Infused tincture of gentian
Sweet flag	Acorns calamus
Syrup of capillare	Syrup of orange flowers
Terra cariosa	Rottenstone
" maris	Turnerite
" asponaria.	Fuller's earth
Thorn apple	Datura stramonium
Tinctal	Native borax
Tridrine	Lactucarium
Tinctura hiers	Wine of aloes
" lyttæ	Tincture of cantharides
Tender oil	Nestfoot oil
Tarnsole	Litmus
Unguentum pernio.	Chillblain ointment
Verjuice	Distilled vinegar
Vermilion	Bisulphure of mercury
Virginian snake-root	Serpentary root
Violet root	Oriss root
Volatile alkali	Ammonia
" salts	Carbonate of ammonia
Wake robin	Arum maculatum
Ward's paste	Confection of pepper
Ware's ointment	Red precipitate ointment
White arsenic	Arsenious acid
" coppers	Sulphate of zinc
" tartar.	Carbonate of potash
Whortleberry	Uva ursi
Winter cherry	Physalis alkekengi
" green	Pyrola umbellata
Winter's bark	Canella bark
Wolf's bane	Monarda
Woody nightshade	Dulcamara
Yarrow	Achilles millifolium
Yellow wash	Lotic hydriargy flavo

[We think it very kind of our correspondents who have given themselves the trouble to compile these lists for the benefit of the trade. It is our intention to publish a complete alphabetical list of synonyms, comprehending the various lists we have printed, or may yet print, in these columns, in our "Diary" for 1876, a copy of which will be presented to each subscriber. We therefore venture to ask for any additions to, or criticisms on, these lists from any subscriber.—En. C. & D.]

MR. D. J. STRANG, late principal assistant to Shields & Mill, Arbroath, has purchased that business in Jedburg previously carried on by Mr. Rawdin, and more recently by Mr. Crerar.

Druggists' Sundries.

A NEW sixpenny feeding bottle, well entitled "the Pot," has been introduced by Messrs. Bourne & Taylor.

At a spelling-match at Indianapolis the other night every-body went down on "ipeacacuanha." It usually brings every-thing up.

A BASHFUL Connecticut drug clerk was puzzled the other day by having one of the female jubilee singers ask him for "fish-coloured court-plaster;" but, after some thought, he handed out black, and dodged under the counter for safety.—*Tennessee Pharmacal Gazette.*

A NEW ADHESIVE PLASTER.—Kauvin recommends a mixture of twenty parts of mullage of gum arabic and one part glycerine spread three or four times upon linen at sufficient intervals to allow it to thoroughly dry. This plaster is glossy, pliable, does not deteriorate after years' keeping, and is considerably cheaper than English plaster or diachylon plaster.

HARMLESS COSMETIC POWDERS.—Mr. Hans M. Wilder (*Am. Journ. Pharm.*) announces the fact that the apothecaries of Copenhagen have agreed on the substitution of certain harmless compounds for the numerous poisonous face-powders now commonly used. In avoirdupois weight, the proportions of the ingredients will be about as follows: White powder, oxide of zinc, 1 oz.; wheat starch, 9 oz.; oil of rose, 3 drops; red powder, carmine, 1 oz.; carbonate of magnesia, 4 ozs.

PREPARATION OF WASHING BLUE.—Twenty lbs. white potato starch, twenty lbs. wheat starch, twenty lbs. Prussian blue, two lbs. indigo carmine, and two lbs. finely ground gum arabic are mixed in a trough, with the gradual addition of sufficient water to form a half fluid homogeneous mass, which is then poured out on a board with strips tacked to the edges. It is then allowed to dry in a heated room until it does not run together again when cut. It is next cut, by a suitable cutter, into little cubes, and allowed to dry perfectly. They are finished by being placed in a revolving drum, with a suitable quantity of dry and finely pulverised Paris blue, until they have a handsome appearance. The cost is about 12 cents per lb.

THE DURATION OF HUMAN LIFE.—There can be no better test of the amelioration which we owe to modern civilisation than the increased length of man's earthly span, as compared with the age attained in ancient and in mediæval times. It is stated, in a recent German periodical, that while in Republican Rome the average duration of life among the upper, always the longest lived classes, was only thirty years, among the same classes in the present century it reaches fifty years. Then, with respect to the "good old times." In the sixteenth century the mean duration of life in Geneva was 21.21 years; between 1814 and 1833 it had reached 40.68 years, and at the present time as many people live there to the allotted term of seventy as three hundred years ago lived to forty-three. The rapidity with which the mean rose in England, even in the earliest period of extension, is shown by the comparison of two financial transactions in this country in 1693 and in 1790. In the former year Government made a considerable profit by borrowing a large sum of money on terminable annuities, based on the mean duration of life at that time; in the latter another loan, based on the same tables, resulted in a serious loss. The average duration of life in England at the present day is about forty years for males, and forty-two for females. The ratio is, of course, higher among the better-to-do classes, lower among the working classes and the poor. The aristocracy and annuitants are exceptionally long-lived; and a much larger number of people than is generally supposed reach the age of one hundred years and upwards.—*Sanitary Record.*

COCHINREAL.—J. Mueller has extracted from the "Diccionario Estadístico Administrativo de las Islas Canarias" some statistics relative to the acclimatisation and cultivation of cochineal on the Canary Islands. Although the insect had been brought to Europe as early as 1523, no efforts were made to acclimatise them, and the cactus upon which they live, until 1825; and the results for the first ten years were rather discouraging than otherwise. While in 1832 but 120 lbs. was yielded, the yields in 1844 amounted to 90,000 lbs.; in 1849, to 390,000 lbs.; and

in 1860 to 600,000 lbs. Of this last yield, 240,000 lbs. was produced upon the Island Gran Canaria alone, and since then the crop from this island has increased enormously, the yields of 1869 and 1870 amounting respectively to 3,000,000 lbs. The great increase in the production was induced by the introduction of guano (since 1852), the application of which necessitated, however, a large supply of moisture. The completion, within the last ten years, of large aqueducts and reservoirs has so furthered the cochineal production that the large production above stated became possible. By the introduction of lac dye from the East Indies the prices of cochineal have, however, been so reduced as to make its cultivation scarcely profitable. Since 1862, tobacco has therefore been introduced, and as the climate and soil of the Canaries have proved very favourable to the cultivation of the latter (the quality is said to be scarcely inferior to that grown upon Cuba), there is a probability that the culture of the cochineal will be superseded by that of tobacco, and that in consequence the dye stuff will again command a higher price. This is the more to be regretted as all endeavours to acclimatise the insect in the East Indies, Java, Algiers, and in various portions of Southern Europe, have signally failed, while in Honduras the culture is yearly more neglected.—*Journal of Applied Science.*



BANKRUPTS.

BROWN, ARTHUR H., The Medical Hall, Boyle, Roscommon, apothecary.

LIQUIDATIONS.

(By arrangement or composition.)

Notices of first meetings have been issued in re the following estates. The dates are those of the petitions:—

- CARON, REUBEN, Biggleswade, Beds, chemist. May 27.
CHATTERTON, PERCY, Oakley Road, Bromley, Kent, medical practitioner. May 10.
CONDT, RICHARD, trading as CONDY BROTHERS & Co., 15 Garlick Hill, Cannon Street, and 6 Duke Street, Adelphi, drug merchant. May 10.
EATON, RICHARD, The Grove, Union Street, Southwark, mechanical engineer, and trading as The Basford Chemical Company, Basford, near Nottingham, chemical manufacturer. May 31.
FAIRCLOTH, WILLIAM H., Wells-next-the-Sea, Norfolk, chemist. May 21.
GRIGGS, EDWARD W., Haverhill, Suffolk, chemist. June 5.
HOLLS, WILLIAM, 70 Fargate, Sheffield, chemist. May 29.
HORTON, HENRY JAMES, 251 Ball's Pond Road, St Paul's Road, Canonbury, surgeon. May 24.
O'NEILL, JAMES, South Bank, near Middleborough, chemist. May 28.
SHAW, JOHN, Broughton-in-Furness, Lancashire, chemist. May 11.
THOMPSON, THOMAS J., Walkergate, Beverley, Yorks, surgeon. May 28.
TOWNSEND, JOHN, Cuckshaton, Yorks, manufacturing chemist. May 21.
TLEND, HENRY G., Potherton Road, Highbury New Park, surgeon. May 28.
ZIMMERMANN, FERDINAND A. & MORITZ, Aldgate Buildings, Fenchurch Street, importers of chemicals and drug, &c., merchants. June 5.

PARTNERSHIPS DISSOLVED.

- DALE & ROBERTS, Stokesley, Yorks, surgeons. March 24.
FARNELL & THOMAS, Haugh Shaw, Trafalgar, Halifax, dry soap manufacturers. May 12. Debts by Frank Farnell.
GRIFFIN, JOHN JOSEPH, & SONS, 22 Garrick Street, Covent Garden, chemical and philosophical implement makers. April 27. As regards John J. Griffin.
HARCOURT & Co., Water Street, Newry, Down, chemists. Feb. 10. Debts by Harcourt and Anderson.
HARLAND & MARSHALL, Wadhurst and Lamberhurst, surgeons. Dec. 31.
MORDAN, F., & Co., 326 City Road, pen, ink, and sealing-wax manufacturers. Dec. 31. Debts by John J. Crosbie.

DIVIDENDS DECLARED.

- ELLS, CHARLES EDWARD (Liq.), Thornbury, Gloucestershire, druggist. 1st and final div. 1s.; W. Tricks, accountant, Nicholas Street, Bristol.
FURNIVALL, WILLIAM (Bkt.), Earlsdon, near Coventry, veterinary surgeon. 1st and final div. 5s. 12d.; June 4 and two subsequent Fridays between 12 and 4; E. T. Peltson, 46 Jordanvale, Coventry.
HOBBS, DANIEL (Liq.), Cambridge, chemist. 2nd and final div. 1s. 8d.; J. Cattling, 2 Freshool Lane, Cambridge.
KEMP, GEORGE (Liq.), Sheffield, surgeon. 1st div. 2s.; C. Corbridge, 135 Norfolk Street, Sheffield.
KITCHENER, THOMAS (Liq.), Chippingham, surgeon. 1st and final div. 2s. 7d.; J. Darley, High Street, Chippingham.
OULVIE, THOMAS, & Co., George Street, Glasgow, manufacturing chemists, &c. (Seq.) 2nd and final, R. E. Aitken's, 66 St. Vincent Street, Glasgow, on and after June 10.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by L. de Fontainemoreau & Co., Patent Agents, 4 South Street, Finsbury, London; 10 Rue de la Fidélité, Paris; and 33 Rue des Minimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

1300. J. D. F. Hald, of the City of London. Improvements in and connected with machinery for cutting cork stoppers. Dated April 16, 1875.
1454. A. MacDonnell, of Newry, Ireland. Improvements in machinery for washing bottles and similar vessels. Dated April 21, 1875.
1477. J. G. Tongue, of London. Improvements in the manufacture of cork or stoppers, and in machinery or apparatus employed for this purpose. Dated April 22, 1875.
1484. J. H. Johnson, of London. Improvements in the manufacture of manure, and in the apparatus employed therein. Dated April 22, 1875.
1576. J. Hargreaves and T. Robinson, both of Widnes, Lancaster. Improvements in apparatus or appliances employed in the manufacture of sulphates of soda and potassa. Dated April 23, 1875.
1632. H. Deacon, of Appleton House, Widnes, Lancaster. Improvements in the manufacture of chlorine. Dated May 3, 1875.
1714. J. Mactear, of Glasgow. Improvements in the manufacture of soda. Dated May 8, 1875.
1723. J. C. Stephenson, of South Shields, Durham. Improvements in the manufacture of alkaline sulphates. Dated May 8, 1875.

Letters Patent have been issued for the following:—

4087. H. B. Condy, of Battersea. Certain improvements in the manufacture of acetate of soda, and in the processes employed therefor. Dated Nov. 24, 1874.
511. C. J. Schofield, of Clayton, near Manchester. Improvements in furnaces, and apparatus connected therewith, for the manufacture of alkalis, the puddling of iron, the roasting of ores, and other purposes. Dated Feb. 11, 1875.

Specifications published during the month:—

Postage 1d. each extra.
1874.

3155. C. Hines. Stoppers for bottles, &c. 4d.
3219. W. P. & C. E. Cherry. Stoppers and bottles. 8d.
3225. J. McIntyre. Purifying sewage water. 8d.
3272. H. A. Bonneville. Corking bottles. 8d.
3461. A. S. Stocker and another. Bottles and stoppers. 4d.
3472. H. Y. D. Scott. Manufacture of ammoniacal salts. 4d.
3483. J. Townsend. Obtaining chlorine. 4d.



TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of the CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of the CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

- Rad. Ipecac., 1s. lb.; Du Barry's food, old prices. 21/24s.
- Two tons fine olive oil, 3s. 10d. gallon; 1 Avery's 5-cwt. new platform weighing machine. Harrop, Chemist, Oldham.
- 14 1-gallon bottles, gold labels, bungs, and caps; also a rain gauge. Kemp, Chemist, Lincoln.
- Maw's electro-magnetic machine, fig. 6, double magnet; scarcely used. 27s. 75/30.
- Good fly papers, 12s. 1,000; Leeming's Essence, cheap. Fortune, Chemist, Anstruther.
- Counter scales, as Maw's Fig. 1; cost 2l. 2s., will take 1l. 1s. or saleable goods. Kernot, Chrisp Street, Poplar.
- Fol. Sennæ Tinnevely Opt. Eight-pence only. Write for sample. Macpherson, Stormoway.
- A 24 5-grain pill machine for a 3-grain. 60 Blackwell Street, Kidderminster.
- Cask of arsenic. Offers wanted. Oil cistern (cheap). Maitland, Chemist, Stonehouse.
- What offers for 240 oz. Macfarlan's morphia? Parker, Bridge Street, York.
- "Pharmaceutical Journal," 1871 to 1873; unbound. Bell, Cheshire & Co., Wholesale Druggists, East Brixton, S.W.
- Muter's "Chemistry," cost 15s., for 10s.; Cooley's "Cyclopaedia," Brown's "Herbal," 1874, 3s. 6d. Alpha, Huntingdon.
- Muter's "Chemistry," no reasonable offer refused. R. Walmsley, Leamington House, Pittville, Cheltenham.
- Valuable collection of questions asked in the new "Minor." 30 stamps. W. C. White, A.P.S., Chemist, East Grinstead.
- A set of ordinary forceps (eight), new, price 26s. Address, Mr. S. Smith, 205 Westminster Road, Liverpool.
- 1 oz. finest grain musk, 15s. cash. Sundries, Tully, Rotherfield.
- A homeopathic pocket morocco medicine case, with thirty 5i. and four 3ss. bottles filled, plaster and lint, quite new, 21s. V. Hill, Braithwaite Road, Birmingham.
- "Caesar," 2s. 6d.; literally translated, 3s. 6d.; Smith's "Principia Latina," 2s.; Morell's "Grammar," 1s.; "English Composition," 1s. 38/75s.

A water-bed 6 feet 3 inches by 2 feet 10 inches, with mattress and extra water-proof cloth. Offers wanted. Address, J. R. Burdon, Bury St. Edmunds.

Statham's students' chemical cabinet, 3l. 3s.; sufficient for Minor, very little used; refilled with fresh chemicals, 60s. J. G., Randall & Son, Southampton.

Bentham's "British Flora," last edition, 1,295 original engravings, perfectly new, 35s. (cost 3l. 10s.). Carriage paid, 9/78.

Four window show carboys, 2 feet high, with cut-glass stoppers (cost 3l. 12s.). What cash offers? W. R. G., 27 Judd Street, Euston Road, London.

Three one-gallon tins and six half-gallon tins of Long's non-poisonous sheep-dipping liquid. Offers requested. Penney, Chemist, Poole, Dorset.

Nearly new, Pindar pill machine with press complete; gallon Liebig's condenser; quantity Skoulding's cough pills. Cash or exchange. Coldwell, Queen's Road, Peckham.

About 50 gallons of finest cod liver oil for disposal, at 6s. 6d. per gallon. Samples on application. Apply to James Stainthorpe, Chemist, Gateshead.

Offers wanted for a 10l. 10s. Pulvermacher's apparatus in good condition, nearly new, and has only been used a few times. Apply to J. S. Jones, 2 Queen's Terrace, St. John's Wood.

Wightman's printing press, nearly new, type, &c., complete; best offer for cash; specimen of printing and type forwarded for stamped envelope. Kershaw, 148 Strand, W.C.

Brass scales on polished mahogany stand, with drawer, 20 inches; gallon graduated percolator, nearly new; half-gallon tincture press. Highest offer accepted. Graves, Stanstead, Essex.

2 cwt. powdered Jamaica ginger, good quality and colour, in quantities to suit, 9d. lb.; samples, 2d. 23 cwt. finest English honey, offers. "Merchant," 60 Silchester Road, Notting Hill, London, W.

Four pear-shaped window show carboys, hold 5 gallons each, with hollow stoppers, to contain coloured liquids; only been in use nine months; 7s. 6d. each, or 1l. 5s. the four. Arthur J. Taylor, Chemist, St. Leonards-on-Sea.

Aids to Minor Examination:—Questions given at the Square, 2s.; Prescriptions do., 1s.; Botany Note-book, 3s.; Dispensing do., 2s. 6d.; Guide to Minor, 1s.; do. to Equation writing, 6 stamps. "Minor," Mr. Tully's, Chemist, Rotherfield.

Nest 30 solid mahogany-fronted drawers, all but two neatly and well gold labelled and fitted with knobs complete; carcasses fitted with solid divisions and locked, size about 6 ft. long by 2 ft. 4 in. high. Price, 2l. 10s. A bargain. J. B. Leslie, Chemist, Sheffield.

"Diseases of Women" (Churchill), 5th edition, 8s.; Kirk's "Handbook of Physiology," 6th edition, 6s.; Squire's "Companion to British Pharmacopoeia," 8th edition (little used) 6s.; "British Pharmacopoeia," 1867, 4s. R. Taylor, Droitwich.

Barth's nitrous oxide gas apparatus, viz. 2 45-gall bottles, economiser and facepiece, price 44l., cost 8l. 18s. 6d.; 3 doz. O'Connell's feeding bottles, 7s. doz.; 3 doz. Maw's Alexandras, 8s. 6d. doz.; 1 doz. do., 10s. 6d. doz., with screw caps; 1 doz. do., 5s. 9d. doz.; 2 doz. Maw's exports, 5s. 9d. doz. Bayley, 12 Victoria Road, Saltaire.

Southall's Materia Medica cabinet, 12s. 6d.; "Pharmaceutical Latin Grammar," 3s.; Steggall's "First Lines," 2s.; Henry's "First Latin," 1s. 6d.; Griffin's "Chemical Recreations," 6s.; Mohr and Redwood's "Practical Pharmacy," 3s. 6d.; "Selecta e Prescriptis," 3s. 3d.; Fowne's "Chemistry," 6s.; Buckmaster's "Inorganic Chemistry," 1s. 6d. All in good condition. H. Varney, 71 High Street, Oxford.

"Pharmaceutical Journal," equal to new; complete from the commencement to the end of 1874. First 12 vols. bound in cloth. Price 47. 10s. Marshall, Sussex House, Porry Vale, Forest Hill.

Post free, good condition, and perfect, Meadows's "Eruptions," 1s. 9d.; Guernsey's "Homeopathic Domestic Practice," 2s. 6d.; Gray's "Supplement to Pharmacopœia," fifth edition, 4s. 6d.; Dr. Clarke's "Important Diseases of Children," part first, 2s.; Fowne's "Chemistry," ninth, 6s. 6d.; Parkin's "Epidemic Diseases," 2s. 6d.; Sampson's "Homeopathy," 2s.; Dr. Scofield's "Practical Chemistry," new, 3s. 6d. (cost 5s. 6d.); James' "On Life and Fire Assurance Annuities," 5s. (cost 15s.); Filcher's "Diseases of the Ear," 5s. (cost 10s. 6d.). No carriage. Brande's "Chemistry," 3 vols., 7s. 6d. (pub. 2l. 6s.); Paris' "Pharmacology," 7th edition, 2 vols., 5s.; Miller's "Chemistry," 2nd edition, 3 vols., 21s.; Pemberton "On Cancer," new, 10s. 6d. (pub. 42s.); Bichat's "Anatomy," 2nd vol., 960 pages, 3s. A. Davis, 161 Seven Sisters' Road, London, N.

Handsome mahogany dispensing screen; mahogany show case with desk; soda water stands; bent glass show cases as Maw's figs. 41 & 42; two flat plate glass show cases well silvered, plate glass doors, 7 ft. 7 in. long and 2 ft. 8 in. wide; plate glass show stand similar to Maw's fig. 261; Southall's materia medica cabinet; 2 doz. 5-gr. pill machine; 1 doz. 5-gr. pill machine; 1 doz. glass gold-labelled jubbe jars with cut glass knobs; 1 doz. gold-labelled show jars with gilt glass covers for violet powder, powder puffs, &c.; two, four, six, eight gallon carboys; two handsome gold-labelled specie jars with gilt glass covers, 30 in. high, and mahogany stands; one handsome gold-labelled specie jar as Maw's fig. 1, with royal arms and gilt enamelled cover, 26 in. high. Every description chemist's fixtures and utensils bought or taken in exchange. For other goods see miscellaneous column. Lloyd Hayner, Chemist's shop fitter, 333 Kingsland Road, London, N.

WANTED.

Squire's "Companion," latest edition. Address, stating price, Mattingly, Post Office, New Swindon.

Muter's "Chemistry," latest edition. G. Knight, 57 Market Street, Ashby-de-la-Zouch.

Dispensing scales, as Fig. 7 Maw's Catalogue. Casely, Chemist, 102 Camden Road.

Latest edition Fowne's "Chemistry" and "Cesar de Bello Gallico," with interlinear translation. E. Ling, Chemist, Esher, Surrey.

Miller's "Chemistry," part 3; Hoblyn's "Dictionary of Medical Terms"; Huxley's "Physiology" (new work, at 3s. 6d.); Squire's "Pharmacopœia of the London Hospitals"; Bowman's "Practical Chemistry"; Pereira's "Selecta e Prescriptis"; Cooley's "Pharmaceutical Latin Grammar;" all latest editions. Also following periodicals:—"Pharmaceutical Journal," the numbers for July 23 and November 12, 1870; June 20, July 20, and October 26, 1872; January 25, February 15 and 22, March 8, June 14, July 19 and 26, October 18 and 25, and November 1, 1873; January 31, June 6, November 7 and 21, 1874. "Chemical News," January 17, 1873, and March 27, 1874. "Nature," October 26, and the whole months of November and December, 1871; all the numbers up to May 2; also November 28 and December 5, 1872; August 28, November 20, and December 4, 1873. "Science Gossip," October, 1868; April and May, 1870. Chemist and Druggist, February and October, 1872; January and December, 1873; February and October, 1874. Samuel Taylor, Chemist, Leeds.

The Mansion House Committee of the Paris International Maritime Exhibition, 1876, have accepted Messrs. F. Wyndham & Co. as exhibitors of their highly-patronised speciality "Esprit des Oûts."



THE slightly improved prospect which the Board of Trade returns held out last month by an advance in the export returns of April 1875, as compared with April 1874, has proved delusive in regard to succeeding operations. The May returns are a clear three million pounds behind those for May 1874, which were themselves a million and a half less than in 1873. This is the severest blow we have had yet, and although to some degree explainable, a million pounds, for instance, being referable to the perfectly exceptional item of telegraphic wire, yet, taken in conjunction with other evidences, it is clear enough that British trade is passing through a crisis which is more dangerous perhaps than severe. It is not perfectly easy to see whether the depression of business in England is a tendency or merely periodic. The severe losses which have fallen on the iron trade are, it must be believed, manifestations of a system not confined specially to that important branch of business. Our chemical manufacturers in the North, there can be but little doubt, have been for the past eighteen months carrying on their works at a bare remuneration in order to keep their hands going, and continually hoping for brighter times. There seems in the market an endless supply of goods held by middle men, and makers have been all along quite unable to obtain remunerative prices for their products in competition with these. This month every product of the heavy chemical market is languid. There is not a trace of life in any department, and prices all the way round are drooping or weak. That some of the works in the Newcastle district will cease production before long is almost certain unless an unexpected improvement should shortly set in. Bleaching powder is quoted at 9s. 6d. to 9s. 9d., and is plentiful in supply. Citric acid is now at 3s. 10d., being 1d. less than last month. Iodide of potassium has been reduced from 11s. to 10s., and sulphate of quinine is also a trifle easier, British selling for 7s. 4d. vice 7s. 4d. Sulphate of copper, on the other hand, is commanding rather higher prices.

Drug sales have brought forward an abundant supply, and a fair demand has been elicited, but no noticeable variations in values have been indicated.

Camphor has commanded less attention, and holders have given way in price; privately 100 cases China reported at 71s. 3d., re-weights; Japan nominal at 75s. per cwt. The *Ardent*, from Hongkong, has arrived, bringing some 2,800 boxes.

Rhubarb—China did not meet with so much attention, but selected root brought extreme prices; of 156 chests a small part sold, middling to fair, chiefly grey with dark fracture, 1s. 4d. to 1s. 10d.; a few cases fine bold pinky trimmed brought 4s. 2d. to 5s. 5d.; pickings and wormy, 5s. 2d. to 9d. per lb. Of oils, olives have still further declined to some extent, and linned is also cheaper than last month. Rapeseed oil is somewhat firmer. American turpentine still declines, being now quoted at 23s., and refined petroleum is to be bought under 9d.

Mr. Gaetano Ainis, of Messina, sends us the following items, dated June 8:—

Sulphur, the staple article of this island, is attracting general attention and causing much anxiety. Many houses in the interior that ranked foremost in every respect as large proprietors and sellers have lately shown unmistakable signs of financial embarrassment; mistrust had replaced confidence, and inactivity follows, aggravated by the worst of all evils, viz., what and when will be the end of this panic? Under these exceptional circumstances nobody dares buy unless provided with a firm order and a vessel ready to receive. These observations apply to Girgenti and Catania, but not to Licato, where prices are firm.

Olive Oil: Nothing doing excepting a few small shipments to the East; prices are the same. The olive trees do not look very promising under the unhealthy influence of southerly winds; the next crop will not be so plentiful as last.

Lemon and Bergamot Juice: A few parcels have been shipped to England. The reduction in value is almost counterbalanced by the fall in the Ex.; this applies also to Messina brown tartar, which is not sought after.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.		1875.		1874.	
ACIDS—		s. d.	s. d.	s. d.	s. d.
Acetic	per lb.	0 4	to 0 4	0 4	to 0 4
Citric	per lb.	3 10	0 0	0 0	0 0
Hydrochloric	per cwt.	5 0	7 0	4 0	7 0
Nitric	per lb.	0 5	0 5	0 5	0 5
Oxalic	per lb.	0 6	0 6	0 6	0 6
Sulphuric	per lb.	0 0	0 0	0 0	0 0
Tartaric crystal	per lb.	1 6	1 7	1 7	1 7
powdered	per lb.	1 6	1 7	1 7	1 7
ANTIMONY ore	per ton	200 0	300 0	200 0	240 0
crude	per cwt.	40 0	0 0	0 0	0 0
regulus	per cwt.	0 0	0 0	0 0	0 0
star	per cwt.	58 0	60 0	47 6	48 0
ARSENIC, lump	per cwt.	30 0	0 0	20 0	0 0
powder	per cwt.	15 3	15 6	10 3	0 0
ERIMSTONE, rough	per ton	155 0	160 0	127 6	145 0
roll	per cwt.	10 0	10 6	9 6	12 6
flour	per cwt.	0 8	12 6	11 6	12 6
IODINE, dry	per oz.	0 3	0 0	0 10	0 11
IVORY BLACK, dry	per cwt.	8 6	0 0	8 6	0 0
MAGNESIA, calcined	per lb.	0 0	0 0	1 6	0 0
MERCURY	per bottle	20 0	0 0	395 0	0 0
MINIUM, red	per cwt.	24 6	25 0	25 0	25 3
orange	per cwt.	37 0	0 0	37 0	0 0
PRECIPITATE, red	per lb.	4 10	0 0	6 2	0 0
white	per lb.	4 3	1 0	0 0	0 0
PRUSSIAN BLUE	per lb.	0 0	0 0	0 0	0 0
SALTS—		1875.		1874.	
Alum	per ton	150 0	157 6	172 6	180 0
powder	per ton	170 0	0 0	192 6	0 0
Ammonia:		1875.		1874.	
Carbonate	per lb.	0 7	0 7	0 7	0 7
Hydrochloric, crude	per ton	680 0	0 0	650 0	0 0
white	per ton	680 0	0 0	650 0	0 0
Sulphate	per ton	360 0	370 0	350 0	355 0
Argol, British	per cwt.	87 6	93 0	87 6	97 6
Red	per cwt.	74 0	85 0	75 0	82 6
Opport, red	per cwt.	74 0	85 0	28 0	32 0
Sicily	per cwt.	62 6	62 6	62 6	67 6
Ashes (see Potash and Soda)		1875.		1874.	
Bleaching powder	per cwt.	9 6	9 9	11 0	11 3
Borax, crude	per cwt.	60 0	60 0	45 0	70 0
British refined	per cwt.	56 0	0 0	75 0	9 0
Calum	per lb.	4 4	0 0	5 9	0 0
Copper:		1875.		1874.	
Sulphate	per cwt.	27 0	28 0	26 0	27 0
Coppers, green	per cwt.	65 0	70 0	65 0	70 0
Corrosive Sublimite p. lb.	per lb.	3 8	0 0	5 0	0 0
Cr. Tartar, French, p. cwt.	per cwt.	113 0	113 6	111 0	112 0
brown	per cwt.	92 6	98 0	95 0	100 0
Epsom Salts	per cwt.	6 6	0 0	5 6	6 6
Glanber Salts	per lb.	6 6	0 0	4 6	5 6
Lime:		1875.		1874.	
Acetate, white, per cwt.	per cwt.	11 0	20 0	14 6	21 0
Magnesia: Carbonate	per cwt.	42 6	45 0	42 6	45 0
Potash:		1875.		1874.	
Bichromate	per lb.	0 6	0 0	0 6	0 0
Carbonate	per lb.	0 6	0 0	0 6	0 0
Potashes, Canada, 1st sort	per cwt.	34 0	0 0	36 3	36 6
Pearlshes, Canada, 1st sort	per cwt.	42 0	0 0	0 0	0 0
Chlorate	per lb.	0 9	0 0	0 10	0 11
Prussiate	per lb.	1 1	0 0	1 0	1 1
red	per lb.	2 3	2 3	2 10	2 11
Tartrate (see Argol and Cream of Tartar)	per lb.	0 0	0 0	0 0	0 0
Potassium:		1875.		1874.	
Chloride	per cwt.	7 0	0 0	6 9	7 0
Iodide	per lb.	10 0	0 0	13 0	13 6
Quinine:		1875.		1874.	
Sulphate, British, in bottles	per oz.	7 0	0 0	7 6	0 0
Sulphate, French	per cwt.	6 7	0 0	7 6	0 0
Sal Acetos	per cwt.	0 9	0 10	0 10	0 11
Sal Ammoniac, Brit. cwt.	per cwt.	44 0	45 0	44 0	45 0
Saltpetre	per cwt.	0 0	0 0	0 0	0 0
Bengal, 6 per cent. or under	per cwt.	19 6	20 3	19 6	21 0
Bengal, over 6 per cent.	per cwt.	18 0	19 3	17 0	19 0
British, refined	per cwt.	23 9	25 0	26 9	27 6
Soda: Bicarbonate, p. cwt.	per cwt.	13 9	14 0	15 9	16 0
Soda Ash	per deg.	0 2	0 0	0 2	0 0
Soda Crystals per ton	per ton	100 0	0 0	102 6	0 0
Hyposulphite, per cwt.	per cwt.	0 0	0 0	0 0	0 0
Nitrate	per cwt.	0 6	12 9	11 9	12 0
SUGAR OF LEAD, White cwt.	per cwt.	42 0	44 0	47 0	48 0
SUGAR OF LEAD, Brown cwt.	per cwt.	22 0	33 0	22 6	33 0
SULPHUR (see Brimstone)	per cwt.	0 0	0 0	0 0	0 0

1875.		1874.	
s. d.	s. d.	s. d.	s. d.
VERDIGRIS	per lb.	1 1	1 5
VERMILION, English	per lb.	4 1	0 0
China	per lb.	0 0	0 0
1875.		1874.	
s. d.	s. d.	s. d.	s. d.
ALGOL, Hepatic	per cwt.	60 0	150 0
Succotrine	per cwt.	80 0	205 0
Cape, good	per cwt.	34 0	35 0
Inferior	per cwt.	25 0	32 0
Barbadoes	per cwt.	40 0	150 0
AMBERGRIS, grey	per cwt.	70 0	90 0
BALSAM—		1875.	
Canada	per lb.	1 9	0 0
Cassia	per lb.	6 3	1 4
Pern	per lb.	3 1	6 4
Tolu	per lb.	6 0	6 6
BARKS—		1875.	
Canele alba	per cwt.	16 0	27 0
Cassia	per cwt.	19 0	22 6
Pern, crown & grey per lb.	per lb.	0 9	2 5
Calisaya, flat	per cwt.	2 6	4 5
Cuba	per cwt.	0 6	1 8
Cardamum	per cwt.	1 0	5 0
Pitayo	per cwt.	0 4	2 0
Red	per cwt.	1 7	0 0
Bachu Leaves	per cwt.	0 2	1 1
CAMPBON, China	per cwt.	71 3	0 0
Japan	per cwt.	0 0	0 0
Red. King, per lb.	per lb.	0 0	2 4
CANTHARIDES	per cwt.	3 0	3 6
CHAMOMILE FLOWERS p. cwt.	per cwt.	35 0	63 0
CASTOREUM	per lb.	2 0	4 0
DRAGON'S ELOON, p. cwt.	per cwt.	80 0	220 0
FRUITS AND SEEDS (see also Seeds and Spices).		1875.	
Anise, China Star per cwt.	per cwt.	110 0	112 6
Spanish, do.	per cwt.	30 0	35 0
Beans, Aquinas	per lb.	1 8	3 0
Cardamoms, Malabar good	per cwt.	3 6	5 0
Inferior	per cwt.	2 0	3 5
Madras	per cwt.	2 9	3 0
Ceylon	per cwt.	5 8	5 10
Cassia Flatula	per cwt.	12 6	15 0
Cascar Seeds	per cwt.	10 0	10 6
Occune Indica	per cwt.	10 0	15 0
Coleonyth, apple	per lb.	0 11	1 0
Croton Seeds	per cwt.	41 0	0 0
Cumin	per cwt.	15 0	20 0
Cumin	per cwt.	15 0	20 0
Dividivi	per cwt.	11 0	17 0
Fennigreek	per cwt.	8 0	16 0
Guinea Grains	per cwt.	22 0	0 0
Juniper Berries	per cwt.	9 0	10 6
Nux Vomica	per cwt.	12 0	17 0
Tamarinds, East India	per cwt.	18 0	40 0
West India	per cwt.	16 0	28 0
Vanilla, large	per lb.	60 0	72 0
Inferior	per lb.	50 0	59 0
Wormseed	per lb.	0 0	0 0
GINGER, Preserved, per lb.		1875.	
HONEY, Chili	per cwt.	40 0	54 0
Jamaica	per cwt.	36 0	47 0
Australian	per cwt.	0 0	0 0
ISINGLASS, Brazil	per lb.	4 3	4 8
Tongue root	per lb.	3 0	5 10
East India	per lb.	1 0	5 1
West India	per lb.	4 8	5 2
Russ. long staple	per lb.	13 0	16 0
Inferior	per lb.	0 0	0 0
Sinowia	per lb.	4 8	5 0
JALAP, good	per lb.	0 8	0 10
Infer. & stems	per lb.	0 5	0 8
LEMONGRASS, per cwt.	per cwt.	0 2	0 2
LIME JUICE	per gall.	0 2	0 2
Liquorice, Spanish per cwt.	per cwt.	40 0	70 0
Liquorice Root	per cwt.	20 0	31 0
MANNA	per lb.	4 6	5 6
small	per lb.	6 6	1 9
MUSK, Pod	per oz.	13 0	45 0
Grain	per oz.	42 0	56 0
OILS (see also separate list)		1875.	
Almond, expressed per lb.	per lb.	1 3	0 0
Caster, 1st pale	per lb.	0 5	0 0
second	per lb.	0 3	0 4
Infer. & dark	per lb.	0 3	0 4
Cod Liver	per gall.	6 6	1 9
Croton	per oz.	0 2	0 0
Essential Oils:		1875.	
Almond	per lb.	30 0	0 0
Anise-seed	per lb.	10 6	9 6
Bay	per cwt.	0 0	0 0
Bergamot	per lb.	10 0	25 0
Cajuput	per bottle	2 6	3 10
Caraway	per lb.	9 0	0 0
Cassia	per lb.	4 4	4 6
Cinnamon	per oz.	1 0	6 6
Cinnamon-Est	per lb.	2 6	3 10
Citronelle	per lb.	0 13	0 0
Clove	per lb.	10 0	0 0
Juniper	per lb.	1 10	2 6
Lavender	per lb.	1 10	5 0
Lemon	per lb.	7 0	11 0

1875.

1874.

1875.

1874.

Essential Oils, continued—	£	s.	d.	£	s.	d.
Leonorarg, per oz.	0	24	0	0	22	0
Neroli	0	4	3	0	4	0
Nutmeg	0	0	7	0	7	8
Orange	0	6	0	8	10	0
Oil of Roses	13	0	25	15	0	22
Patchouli	2	9	4	3	6	4
Peppermint	21	6	23	20	6	22
American	35	0	36	29	0	32
English	1	4	1	1	10	0
Rosemary	2	3	2	6	2	3
Sassafras	12	0	19	6	18	0
Spearmin	0	73	0	10	3	0
Thyme	0	38	0	42	0	32
Macis, expressed	22	0	35	14	0	28
Opium, Turkey	160	0	315	85	0	85
inferior	2	0	4	2	9	5
QUASSIA (bitterwood) per ton	2	0	4	2	9	5
RHUBARB, China, good and fine	2	0	4	2	9	5
Good, mid. to ord.	0	0	0	0	0	0
Dutch trimmed	0	0	0	0	0	0
Russian	0	0	0	0	0	0
ROOTS—Columba, per cwt.	18	0	20	18	0	24
China	21	0	26	23	0	24
Galangal	23	0	24	17	0	20
Gentian	30	0	33	30	0	33
Hellebore	26	0	75	30	0	70
Orris	38	0	75	38	0	75
Pellitory	0	4	2	0	5	0
Phak	3	2	3	3	3	6
Rhatany	0	1	0	1	4	0
Seneka	18	0	23	24	0	28
Snake	0	0	0	170	0	200
SAFFRON, Spanish	0	0	0	0	0	0
SALEP	0	0	0	0	0	0
SALSA-PARILLA, Lima per lb.	0	0	0	0	0	0
Pars	1	4	2	1	3	7
Honduras	2	3	2	1	5	2
Jamaica	20	0	26	25	0	30
SASAPARILLA, per cwt.	7	0	24	8	0	24
second & ordinary	0	0	0	0	0	0
SENA, Bombay	0	1	0	0	4	0
Timbuctu	0	1	0	0	8	0
Alexandria	0	2	6	0	4	1
SPERMACE, refined	1	3	0	1	3	4
American	1	1	2	1	2	1
SQUILLS	0	4	0	1	15	0

GUMS.	£	s.	d.	£	s.	d.
AMMONIAC, drop	3	0	4	3	0	3
" lump	8	4	0	8	0	3
ANDEI, fine washed	10	10	13	10	10	13
bold scraped	10	10	11	7	6	11
sorts	6	10	10	6	10	11
dark	4	10	10	4	0	15
ARABIC, E. I., fine	2	15	0	3	0	3
pale picked	1	13	0	2	15	0
erts., mid. bottn	7	10	2	9	0	2
garblings	0	7	0	7	10	11
Turkey, pick. gd. to fin	0	3	6	18	4	0
second & inf.	1	10	2	15	2	10
in sorts	1	10	1	1	10	1
Gedda	1	0	1	1	10	1
BANBURY, white	1	10	1	1	15	2
brown	1	10	1	1	15	2
AUSTRALIAN	1	10	2	8	10	2
ASAFETIDA, cm. to fin	12	0	2	16	0	210
BENJAMIN, 1st & 2nd	20	0	30	10	0	28
Sumatra 1st & 2nd	7	10	10	10	0	12
3rd	3	17	6	4	7	6
CORAL, Angola red	5	10	6	15	0	12
Benguela	4	0	0	5	0	10

Sierra Leone, per lb.	£	s.	d.	£	s.	d.
Manilla	0	10	1	2	4	10
DAMMAR, pale	25	0	36	15	0	23
Singapore	68	0	62	41	0	60
EUPHORBIA	11	0	20	11	0	15
GALBANUM	13	0	11	13	0	15
GAMBAGE, pick. gd. to fin	195	0	380	210	0	280
GUAIACUM	0	8	2	6	1	10
KOKO	50	0	80	50	0	80
KOWEE, rough	43	11	6	130	0	240
scraped sorts	61	0	78	31	0	62
Mastic, picked	4	0	6	5	0	6
MYRRH, pt. & fine per cwt.	119	0	230	140	0	260
ord. to fair	72	0	115	70	0	110
OLIBANUM, p. drop	52	0	60	50	0	70
amber & yiv	43	11	6	60	0	65
garblings	42	0	33	37	0	37
SENEGAL	2	0	2	5	0	3
SANDARAC	90	0	105	80	0	105
SHELLAC, Orange	40	0	60	20	0	275
Liver	220	0	265	220	0	235
Tus	80	0	23	33	0	24
THAGACANTH, leaf	200	0	330	200	0	300
in sorts	80	0	195	80	0	170

OILS.	£	s.	d.	£	s.	d.
EMAL, pale	38	0	0	37	0	0
yellow to tinged	32	0	0	32	0	0
brown	30	0	32	30	0	32
SEED	100	0	0	100	0	0
SOPRAN	43	0	0	40	0	40

Oils, continued—	£	s.	d.	£	s.	d.
WHALES, South Sea, pale, per tun	55	0	36	55	0	36
yellow	32	0	34	30	0	34
brown	29	0	30	29	0	30
East India, Fish	24	10	23	20	10	23
OLIVE, Gallipoli	0	0	0	45	0	0
Trieste	42	5	40	44	0	0
Larant	39	10	40	38	0	40
Mogador	39	0	0	37	10	38
Spanish	42	10	43	41	0	0
Siberia	0	0	0	34	10	35
COCONUT, Ceylon	43	10	44	31	10	39
Cochin	37	10	37	35	0	0
Sydney	37	10	37	35	0	0
GROUND NUT AND GINGELLY:						
Bombay	0	0	0	0	0	0
Madras	34	10	0	35	10	36
Lard	34	10	0	34	10	0
LINSKED	24	12	0	29	0	29
RAPESEED, English, pale	32	15	0	33	10	0
Foreign, pale	33	10	0	34	0	35
brown	0	0	0	0	0	0
COTTONSEED	69	0	27	65	0	26
LARD	69	0	0	48	0	49
TALLOW	23	0	28	26	0	32
TURPENTINE, American, cas.	23	0	0	28	0	28
French	23	0	0	28	0	28
PETROLEUM, Crude	0	0	0	0	0	0
refined, per gall.	0	8	0	0	8	0
Spirit	0	8	0	0	8	0

SEEDS.	£	s.	d.	£	s.	d.
CASAHY	250	0	300	60	0	66
CALAHY, English per cwt.	0	0	0	0	0	0
German, Ac.	25	0	46	0	0	0
CORIANDER	8	0	18	10	0	13
Hemp	36	0	36	0	0	0
LINSKED, English per qr.	0	0	0	0	0	0
Black Sea & Azof	55	0	66	59	0	0
Calcutta	59	0	69	60	0	0
Bombay	60	0	60	63	0	0
St. Petersburg	0	0	0	56	0	57
Mustard, brown, per bah.	0	0	0	10	0	15
white	0	0	12	0	0	11
Poppy, East India, per qr.	47	0	0	52	6	0

SPICES.	£	s.	d.	£	s.	d.
CASSIA ALGUNA	55	0	75	63	0	70
Vera	24	0	50	24	0	69
Buds	110	0	0	115	0	117
CINNAMON, Ceylon:						
1st quality	2	9	4	2	4	4
2nd do.	2	1	3	2	0	3
3rd do.	1	8	2	10	0	10
Tellicherry	3	0	3	0	0	0
Cloves, Penang	1	8	1	1	9	1
Amboy	1	4	1	1	6	4
Zanzibar	1	4	1	1	3	0
GINGER, Jam., fine per cwt.	95	0	200	110	0	250
Ord. to good	75	0	160	60	0	100
African	58	0	0	63	0	0
Bengal	48	0	55	53	0	0
Malabar	50	0	0	50	0	0
Cochin	72	0	127	60	0	120
PETER, Bk., Malabar, per lb.	0	68	0	0	8	0
Singapore	0	6	0	0	54	0
White Tellicherry	8	11	1	1	6	1
Cayenne	1	6	3	1	3	1
MACIS, 1st quality	3	0	3	3	6	4
2nd and inferior	2	0	2	2	11	4
Nutmegs, 75 to 60 to lb.	4	3	4	3	4	3
90 to 80	2	9	3	6	3	3
132 to 95	2	11	3	2	6	3
3	3	0	0	0	22	0

VARIOUS PRODUCTS.	£	s.	d.	£	s.	d.
COCHINEAL—						
Honduras, black	1	9	2	2	1	2
" silver	1	8	2	2	1	3
" pasty	1	8	1	1	9	2
Mexican, black	1	8	1	1	7	2
" silver	1	7	0	1	11	2
Tenerife, black	1	8	3	2	1	3
" silver	1	7	1	1	1	2
SOAP, Castile	36	0	37	33	0	34
SPONGE, Turk., fin. p. cwt.	12	0	16	12	0	16
Fair to good	4	0	11	4	0	11
Ordinary	3	3	6	3	1	3
Bahama	0	6	3	0	6	3
TERRA JAPONICA—						
Gambier	25	3	25	6	24	9
Free cubes	25	0	43	0	33	0
Cutch	23	6	24	22	0	22
WOOD, Dry, Bar	44	10	25	0	0	0
Brazil	27	0	26	23	0	26
Logs	9	0	16	9	0	18
Cam	28	0	42	21	0	32
Panic	9	9	15	9	9	15
Jamaica	8	0	8	7	0	7
Logwood, Campechy	9	0	0	9	0	0
Honduras	7	0	7	10	0	10
St. Domingo	6	0	6	6	0	6
Jamaica	6	7	6	10	0	10
LIMA, first pile	11	0	12	12	0	14
RED SANDERS	6	0	6	2	0	0



CORRESPONDENTS will please observe that the Editor cannot undertake to send private replies to the class of queries which are answered in this page. He will be much obliged if readers will communicate letters for this department as well as draw from it. All communications should give (in confidence) the name and address of the writer, though any *nom de plume* may be adopted. No query can be attended to in the current month which reaches this office after the 10th.

Protest.—We advise you to pay the fine as promptly as possible. You seem to admit that you have lost your position on the register by your own negligence somehow, but you seem to think the Registrar ought to have watched over you. When you think over the matter quietly you will see you are wrong. Business men ought to make time to study Acts of Parliament which especially concern them. If they will not they must take the consequences.

J. S.—The label enclosed by you certainly renders the medicine liable to the medicine stamp.

Dilla.—Certainly not. The dispute now proceeding is between the late partners in the property.

Impermeable Paper.—By plunging a sheet of paper into an ammoniacal solution of copper for an instant, then passing it between the cylinders and drying it, it is rendered entirely impermeable to water, and may even be boiled without disintegrating. Two, three, or any number of sheets thus rolled together become permanently adherent, and form a material having the strength of wood. By the interposition of cloth or of any kind of fibre between the layers, the strength is vastly increased.

F. S.—You can sweeten mouldy casks by first washing them well with a solution of soda, and then letting them stand for a day or two filled with water which has been acidulated with hydrochloric acid.

W. T.—We hope to print the Sale of Food and Drugs' Act in our next issue, if, as we hope, it will have passed through both Houses by that time.

Preston asks for information respecting the preservation of animal matter (gelatine size).

Apprentice.—In reply to the query of *F. W.* in last month's C. & D., perhaps if he were to use a little hot water instead of proof spirit, he would find the pills not lose their shape. Of a necessity they must be made rather hard."

H. G. (Hampton).—The proprietor of a chemist and druggist's business must be registered. A registered assistant as manager is not sufficient, except in cases where a business is being carried on by executors or administrators, which is permitted by the Pharmacy Act, provided that a registered assistant is employed as manager. This is not merely our "opinion," it is the legal position of affairs.

A Yorkshire quack doctor's prescription:—"1d. oil of a sin a man foot bak wark." A correspondent writes:—"The above characteristic order was presented at our shop lately from a notorious quack, as his specific for the complaint named in the order. Its translation is perfectly plain-sailing for the genuine Yorkshirman; but for the benefit of the unlearned, it may be interpreted thus:—1d. oil of cinnamon for the backache."

A. G. S. O.—A man may call himself "wholesale druggist," if he is such *bona fide*; and he requires no authorisation from the Pharmaceutical Society to conduct such a business. But if under that seductive title he indulge in a surreptitious retail business, keeping open shop for dispensing prescriptions and dealing in poisons, he then infringes what you call "the Chemists and Druggists Act," commonly known as the Pharmacy Act, and his mean attempt at evasion would only render his discomfiture the more complete should the myriads of the law become cognisant of his procedure.

A correspondent asks how pickle makers suspend mustard in vinegar, as in certain pickles (such as piccalilli, we suppose). From formulae before us we do not find that any substance is employed to thicken the vinegar, except what it extracts from the pickles themselves. Turmeric, however, seems to be the colouring matter adopted, capsicum, ginger, and crushed mustard seeds being among the ingredients.

W. H. Hyatt.—*Glechoma hederacea*, ground ivy, cat mint; *Theriacum marum*, cat thyme; *Hyssopus officinalis*, all belong to the Natural Order Labiate; *Theriacum* was formerly official in the London Pharmacopoeia as an ingredient in pulv. asarabacum co.; lavender flowers are generally substituted for it now. *Centaurea benedicta* is one of the composite; it is also and better known as *carduus* or *cicuis benedictus*.

Silica.—None of the books at our elbow enable us to answer your question positively, but presumably that in the interests of science you would not demur to the risk of involuntary self-sacrifice we suggest the following:—Mix the substance with water and add an excess of hydrochloric acid. Into a minute portion of the mixture pour a solution of ferrous sulphate. Collect the reduced metal, and after drying cautiously heat strongly in a test tube or crucible. If nothing remarkable happens repeat the process with the remainder of the mixture. In case of accidents it would be well to deposit an explanatory memorandum where it could be found should yourself be missing.

C. B.—We believe that your best plan would be to dissolve hydrochlorate of morphia in the alcohol to be used for colloidion, before the addition of ether. Try it, and let us know the result.

J. H. K.—Taylor's solutions of the hypophosphites may be obtained through any wholesale druggist.

In re Water of Wormwood.—This is mentioned in "The vertuous booke of Distyllacyon of the waters of all maner of Herbes with the figures of the stylatoryes" Eyrst made and compiled by the thyrte yeres study and labour of the most conyng and famous master of physike Master Jheronymus Brydyng, now newly translated into English, &c. Imprinted at London in Southwark by me, Peter Trevers, dwelling in the sign of the widow, in the yere of our lord god MDCXXVI the xxvii day of July."

"chapter colxiv.
"Water of wormewode.
"Absinthium in latyn. . . . The same water hathe right meruelous great vertues, for it is sayde of dyvers persones that the lye or water of the same herbe hathe he gotten for a token in maner of incantacyon unto grev explaynes or conductors of an hoste overmaye beleivynge that through suche a token they shoulde have victorye against their enemyes."

Also recommended for 33 other complaints and purposes.
This, I think, must be the water of wormwood mentioned by your Lancashire correspondent.—Yours, &c., WALTER G. PIPEL.

The American Druggists' Circular gives the following information:—

FRUIT MEAD OR METHINGLIN.

Take two gallons of white or red currants, or both, 1½ gallons of boiling water, 30 pounds of honey, and 3 ounces of cream of tartar.

These ingredients should be well mixed together by stirring for a quarter of an hour, and then allowed to ferment in a warm place, either with or without the addition of yeast.

When the fermentation is complete add one gallon of brandy, and if a sparkling drink is desired, bottle it; it will be ready for use in a few months. It may also be used as a still wine as soon as the fermentation is over. We republic from our files, for the benefit of new subscribers, the following formula for

COLOURING INK POWDERS.

Red Ink Powder.

Take 20 grains pure carmine	..	..	..	Label No. 1.
18 " gum arabic	..	..	..	Label No. 2.

These are to be put up in separate packages.

For use, dissolve No. 1 in three fluid ounces of ammonia water, add No. 2, and agitate at intervals until complete solution has been effected.

Thirty grains of good drop lake may be substituted for the carmine where a saving in cost is an object. This is said to produce an ink having a superb colour.

Purple Ink Powder.

Take 1 lb. logwood, rasped	..	..	..	Label No. 1.
14 ozs. verdigris and 1 lb. 2½ ozs. alum	..	..	..	Label No. 2.
4 ozs. gum arabic	..	..	..	Label No. 3.

For use, infuse No. 1 in 1 gal. of water, and after twenty-four hours strain the infusion into a vessel containing No. 2; add No. 3, and agitate at intervals until solution takes place.

Allow the whole to remain three or four days before use.

Blue Ink Powder (Mohr's).

Take Pure Prussian blue	..	..	..	6 parts.
Oxalic acid	..	..	..	1 part.

Mix. For use, rub the powder to a smooth paste with a little warm water, and then dilute with enough to render it fluid and of the proper depth of colour.

Neado.—"May I ask if any of your readers can suggest a plan for keeping Aqua Rosæ, Aqua Sambuci, &c., when diluted. My experience is that they keep well while in a concentrated state, as sent out by the wholesale houses, but after dilution decompose rapidly, and I cannot, as yet, find any remedy."